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POLLUTION OF INTERSTATE WATERS LOWER COLUMBIA RIVER, BONNEVILLE DAM TO CATHLAMET, WASHINGTON. SECOND SESSION HELD AT PORTLAND, OREGON ON 3 SEPTEMBER 1959. TRANSCRIPT OF CONFERENCE

Public Health Service
Washington, D. C.

September 1959

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TRANSCRIPT OF CONFERENCE

IN THE MATTER OF

POLLUTION OF INTERSTATE WATERS

LOWER COLUMBIA RIVER

BONNEVILLE DAM

TO

CATHLAMET, WASHINGTON

Second Session

September 3, 1959

Portland, Oregon

NATIONAL TECHNICAL
INFORMATION SERVICE

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CONFERENCE ON POLLUTION OF INTERSTATE WATERS

LOWER COLUMBIA RIVER
(Below Bonneville Dam)

Auditorium, Interior Building
Portland, Oregon
September 3, 1959

CHAIRMAN -- MURRAY STEIN, Chief
Interstate Enforcement
Water Supply and Water Pollution
Control Program
U. S. Public Health Service
Washington, D. C.

CONFEREES:-

ART GARTON, Director
Washington Pollution Control Commission
Olympia, Washington

CURTISS M. EVERTS, JR., Secretary
Oregon State Sanitary Authority
Portland, Oregon

RICHARD F. POSTON, Assistant Regional Engineer
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Region IX
San Francisco, California.

L. B. DWORSKY, Officer in Charge, Technical Advisor to the Conferees
Water Supply and Water Pollution Control Program
U. S. Public Health Service
Portland, Oregon

GERALD M. HANSLER, SA Sanitary Engineer, Executive Secretary
U. S. Public Health Service to the Conference
Washington, D. C.

(A list of other attendees is attached as "Appendix A".)

... Whereupon, the Conference was convened at 9:15 o'clock a.m., Thursday, September 3, 1959, by Chairman Stein ...

CHAIRMAN STEIN: The second session of the Conference is open.

This Conference in the matter of pollution of the interstate waters of the Lower Columbia River, involving the states of Oregon and Washington, is being held under the provisions of Section 8 of the Federal Water Pollution Control Act. Under the terms of that Act, the Surgeon General is required to call a conference of this type when requested to do so by a State Board of Pollution Control Agency or when, on the basis of reports, surveys and studies, he has reason to believe that pollution subject to abatement under the Act is occurring.

The first session of this Conference was held here on September 10th and 11th, 1958. In order to make it abundantly clear for the record, the area we will be covering, reading from the first session describing this area, it is the Lower Columbia River from Bonneville Dam to Cathlamet, Washington, which forms the boundary between Washington and Oregon. The principal cities in this stretch of the river are Portland, Oregon, Vancouver, and Longview, Washington. Numerous industries are situated on or near the banks of this section of the river. The principal products of these industries are wood products, including pulp and paper, electrometallurgical products and processed foods.

Now, as the first Conference indicated, there were reports, surveys and investigations of the Public Health Service that indicated that pollution subject to abatement under the Federal Act was existing. For the second session of the Conference, in addition we have received the following letters, both letters addressed to the Surgeon General of the Public Health Service. The first letter dated July 24, 1959, is under the letterhead of the State of Washington Pollution Control Commission. It says:

"Dear Sir: On September 10 and 11, 1958, the Public Health Service held a Conference at Portland, Oregon in connection with the pollution of interstate waters of the Lower Columbia River. In accordance with the conclusions of the hearings, the Pollution Control Commission hereby requests that the Conference reconvene on September 3, 1959. The Commission has conferred with the Oregon State Sanitary Authority

and our two states are in agreement on this action. It is our understanding that the Sanitary Authority will submit a similar request." Signed "Art Garton, Director."

The other letter is dated July 24, 1959, addressed to the Surgeon General, under the letterhead of State of Oregon, Oregon State Sanitary Authority. It says:

"It is respectfully requested that the Public Health Service Conference in the matter of pollution of interstate waters of the Lower Columbia River be reconvened in Portland, Oregon, on September 3, 1959, to consider an action program designed to abate pollution of these waters. We have conferred with representatives of the Washington State Pollution Control Commission and have jointly agreed on this course of action and the date suggested for the continuation of the conference. It is my understanding that a similar letter of request is to be forwarded to you from the Washington State Pollution Control Commission. It will be appreciated if you will advise me whether or not the date is satisfactory to you and your representatives."

On August 3, 1959 letters were sent to the Oregon and Washington agencies which called for the reconvening of the Conference here on September 3rd.

Now, the official conferees for this Conference are those representing the states of Oregon and Washington and the Public Health Service. I should like to emphasize that under the law this is a Conference between the Public Health Service and the representatives of the states. The states are authorized to bring and have participate in the action anyone they wish, but this is a Conference between these official agencies. The conferee for the state of Washington is Mr. Art Garton. The conferee for the state of Oregon is Mr. Curtiss Everts. The conferee for the Public Health Service is Mr. Richard Poston, with headquarters at San Francisco. Also sitting here is Mr. Leonard Dworsky of the Public Health Service, of the Portland office, who will be technical advisor to the conferees. Mr. Gerald Hansler will be executive secretary to the Conference, and my name is Murray Stein of the Public Health Service, and I am from Washington.

Both the state and the federal government have

responsibilities in dealing with interstate pollution control problems. The Federal Water Pollution Control Act declares that the states have the primary rights and responsibilities in taking action to abate and control interstate pollution. It has always been the policy of the Public Health Service to recognize this traditional role of the states. The function of the Public Health Service is to encourage the states in these activities. However, the Public Health Service is charged by law with specific responsibilities in connection with interstate pollution problems. The Federal Water Pollution Control Act provides that pollution of interstate waters which endangers the health or welfare of persons in the state other than that in which the pollution originates is subject to abatement.

During the first session of the Conference much information was provided for the record indicating that health and welfare of persons in both Washington and Oregon were endangered by such pollution. In answer to specific questions, the chief of the streams investigation activity of the Public Health Service indicated that in his opinion that was interstate pollution subject to abatement. Referring to the previous record, this was Mr. Kittrell. It is my understanding that in developing the action program to be presented here today, the states have developed the action program with that end notion in view.

Now, under the federal law, the Surgeon General prepared a summary of the first session of the Conference, and I want to indicate here that this conference is merely an extension of this first session of the Conference. For anyone who will participate in the Conference, it is not necessary, unless you really feel compelled to do so, to repeat what was said at the first session, because this is part of the record and it will be considered as one complete and continuing record.

Now, among other things, at this first session the conferees agreed that there are problems of pollution of the interstate waters of the Columbia River; that these interstate pollution problems are: (1) Bacterial contamination resulting from the discharge of untreated or inadequately treated sewage containing coliforms, which may create a potential health hazard to commercial and recreational uses of the Lower Columbia River and considerable deterioration of the quality of the water of the Lower Columbia River so as to

interfere with its use as a public water supply; (2) discharges from industries in the Lower Columbia River, notably pulp and paper industries, which contribute to the growth of slimes, creating conditions deleterious to commercial and sport fishing and to persons engaged in these activities, and that the problems mentioned above need further evaluation; that measures taken to date have not been adequate to control bacterial contamination in the river and to control slime growth; that the delays in controlling bacterial pollution have been due to the fact that some municipalities have not taken action to install remedial measures; that delays and solutions to the slime problems caused by industrial waste may be due to either inadequate knowledge of stream conditions, which must be maintained to deter the growth of slimes, and possibly the lack of perfected methods to control such waste.

The conferees also agreed at the first session that as soon as practicable after conclusion of the first session of the Conference both the Washington Pollution Control Commission and Oregon State Board of Health should jointly undertake an action program to control water pollution in the Lower Columbia River. Representatives of both the states and the Public Health Service were to make themselves available for meetings to develop such a joint action program. This program would include a determination of the quality of water that is considered to be needed for legitimate water uses, and what is to be done to achieve this water quality, and the time that action to achieve this water quality is to take.

The purpose of this second session of the Conference will be to review and evaluate progress made to date and develop a time schedule of remedial action. For the people who were not present at the first session of the Conference, we suggest you may wish to make reference to the proceedings of the first session for a background of technical information present.

Now I would like to point out that, as at the first session, at the second session of the Conference we are bound by the provisions of the Federal Act. After the Conference is concluded the Surgeon General of the Public Health Service is required to prepare a summary of the Conference. This summary must include the following points: Occurrence of pollution of interstate waters subject to abatement under the

Act; adequacy of measures taken to abate the pollution, and the nature of delays, if any, being encountered in abating the pollution. In addition, if the Surgeon General believes upon the conclusion of the Conference that effective progress toward abatement of pollution is not being made, he is to make recommendations to the State Water Pollution Control Agencies concerned.

In order to assist the Surgeon General in the making of such recommendations if they are in order, Mr. Dworsky suggested, if appropriate, the conferees develop a time schedule so, if reasonable, that can be adopted by the Surgeon General and be developed here rather than to have one developed in Washington.

Now a word about the procedures governing the Conference. We will make a transcript of what is said here and, as I pointed out, a summary will be prepared at the conclusion of the Conference. Both the transcript and the summary will be distributed by the state agencies concerned. This is in line with the Public Health Service policy of encouraging state action and having the relationships of the people in this area directly with the states on this matter rather than with the Public Health Service. The conferees will be called upon to make statements. In addition, the conferees, at appropriate times, can call upon their invitees to also make statements and participate in the Conference. At the conclusion of any statement the conferees will be given an opportunity to ask questions or to make comments. Other participants are asked to withhold their statements, their questions, until the time that they make a statement, or toward the conclusion.

Now, a general agenda has been prepared as a guide. I am a little embarrassed about this agenda, because the most prominent thing on it seems to be my name, and I had nothing to do with it. But we are using the agenda just as a guide. This is a flexible tool and if for the purpose of the Conference we want to deviate from the agenda, the conferees will be free to do so.

Now, before we go on, the conferees at this point have requested that we recess so the conferees representing the states of Washington and Oregon might confer with people they have invited to determine how many people are here and to discuss their presentations with them. Now, the conferee

for Washington, as we have indicated is Mr. Art Garton, and Mr. Garton will begin on that side of the room -- that is, toward my right -- and the representatives or participants from Washington should see Mr. Garton during this recess. Mr. Everts is the conferee for Oregon, and he will go toward the wall, or to my left. The participants from Oregon should be in touch with Mr. Everts. And we anticipate that this recess should not take more than fifteen minutes. Mr. Poston, the conferee for the federal government, will be here, and any federal agency representatives who will participate or wish to make a statement should see Mr. Poston here.

With that, we will stand adjourned for approximately fifteen minutes.

(Whereupon a brief recess was taken, following which the Conference was reconvened.)

MR. STEIN: The Conference is reconvened.

Before we call upon the states, I'd like to make two announcements. One, anyone making a statement other than the conferees should identify themselves for purposes of the record. Anyone making a statement should come up to the lectern and speak into the microphone. We would also appreciate everyone signing the register in the back, if they have not already done so.

One more point. As we pointed out, this Conference is merely an extension of the one started last year and the material appearing on page 62 of the transcript of the first session of the Conference dealing with waivers of offenses by anyone participating in this Conference, second session, is just as applicable here as it was to the first session.

Now at this point we would like to call upon the representatives of the state of Washington to review progress made to date.

Mr. Garton.

MR. GARTON: Mr. Chairman, gentlemen, before calling on our staff people from the state of Washington to bring this Conference up to date, I would like to ask that Appendix B and C of the Action Program be recorded in the proceedings of this Conference, in addition to the statements that we have

prepared for today, bringing up to date the Action Program of the State of Washington under Appendix B and C.

CHAIRMAN STEIN: Mr. Garton, without objection, that will appear as read after the statements made by the Washington representatives.

MR. GARTON: Mr. Chairman, I would first like to call upon Mr. Don Peterson, our state of Washington representative on the Action Program as adopted, for his report.

Mr. Peterson.

MR. PETERSON: Appendix C listed the status of the progress made by industry since the last session, or the first session of the Conference. I have a few comments to add to Appendix C at this time, first primarily pertaining to the pulp and paper industry in the Lower Columbia River.

At the conclusion of the first session of the Conference in September, 1958, it was agreed that the basic pollution control need of the pulp industry of the Lower Columbia River involved the substantial reduction, if not the elimination, of sphaerotilus nutrients from the mill effluents. Since that date there have not been any substantial changes in mill operations to reduce the quantity of nutrients in the effluents of these pulp mills, although there has been considerable research accomplished by the nutrient contributor, Crown Zellerbach Corporation of Camas.

This research has been primarily concerned with various biological fermentation processes with the end point in mind of a salable product. Some of the avenues of investigation have yielded some very promising possibilities. Also under investigation has been the intermittent discharge method of waste control with tests performed both experimentally in the laboratory and in the river itself under controlled conditions.

Representatives of several of the pulp mills, including Crown Zellerbach Corporation, have indicated that they wish to make statements at the hearing today, so I will not enlarge on the research program at Camas or discuss any of the other mills individually at this time. I would like to, however, make some comments in regard to the Basic Data Program

that has recently been initiated on the Lower Columbia River.

To provide much needed background information on the Columbia and to provide a basis for a monitoring system, a Cooperative Water Quality Basic Data Program has been established on the lower river. Participants in the survey program include the Washington Pollution Control Commission, Oregon State Sanitary Authority, and the following pulp and paper industries; Crown Zellerbach Corporation of Camas, Columbia River Paper Mills of Vancouver, Crown Zellerbach Corporation of St. Helens, Longview Fibre Company of Longview, and the Weyerhaeuser Company of Longview.

Eleven cross sections have been established on that stretch of the river from Bonneville to below Cathlamet, with a total of forty-six actual sampling stations. Samples are collected twice monthly, with eighteen analyses performed on each sample, which gives us an overall total of about 1650 analyses per month. The tests cover a wide range of chemical, physical, bacteriological and biological water quality characteristics.

Although aimed at current pollution problems on the lower Columbia, the program is scheduled to continue for an indefinite period of time and will provide invaluable data for future development and management of all known water uses.

That concludes my statement, Mr. Chairman.

CHAIRMAN STEIN: Do you have any questions or comments, Mr. Everts?

MR. EVERTS: No.

CHAIRMAN STEIN: Mr. Poston?

MR. POSTON: No.

CHAIRMAN STEIN: Mr. Garton.

MR. GARTON: Thank you, Mr. Chairman. Next I would like to introduce to the group to make a report on Appendix B and C, bringing from the date it was provided for printing up to the current date what has been done by the municipalities and industry generally on the Washington side of the

Columbia River, Mr. Bryan Johnson.

CHAIRMAN STEIN: May I suggest that if any of you have a written statement you wish to read from, it might facilitate the proceedings if you would give a copy of that to the reporter before you begin talking, if you have an extra copy, and if you deviate, he can make the changes.

MR. JOHNSON: Mr. Chairman, conferees, gentlemen:

The purpose of this presentation is to supply more detailed information on recent progress and future plans of Washington municipalities and industries.

MUNICIPALITIES

Camas: The report listed Camas as needing storm water separation, replacement of a low-lying trunk sewer serving the area east of the plant, and an increased chlorination of the effluent.

Two ordinances have been passed by the City to eliminate all storm water from sanitary sewers. One, passed in 1955, prevents the discharge of any storm water into the sanitary sewer, and the second ordinance prohibits the construction of any new combined sewers.

In 1956, a General Obligation bond issue for the construction of storm sewers was defeated. Since then the City Council has undertaken a long-range plan for storm water separation. During 1958, $35,000 was spent on storm sewers. Additional funds will be available for storm sewer construction in 1960.

An increase in water-sewer rates is planned so that adequate revenue can be assured for reconstruction of the low-lying trunk sewer serving the eastern section of Camas.

To achieve a more effective chlorination of the effluents, changes have been made in the chlorine dosage rate and point of application.

Vancouver: Improvements needed by Vancouver in 1958 included the interception of three outfall sewers, serving about 5,450 persons, storm water separation, and an increase in the chlorination of the effluent.

The Jantzen sewer, serving 950 persons, has been intercepted and design for the interception of the 18th Street sewer, serving a population of 2,000 is under way. The condition of the final outfall, the Fruit Valley sewer, serving about 2,500 persons, has not changed.

Vancouver has been operating on a pay-as-you-go basis to achieve storm water separation. Since 1954 the City has spent $422,000 in the construction of storm sewers. These sewers consist of ten projects that will eventually reduce storm water flow to the treatment plant. Changes have been made in chlorination of the effluent.

Battle Ground, Ridgefield and Vader: In September, 1958, neither of these three communities had any type of sewage treatment. All of them were discharging raw sewage to the Columbia or its tributaries. The following is a summary of the progress made by these three communities in the past year.

Battle Ground: In April, contracts were awarded at Battle Ground for construction of interceptor sewers, sewage lift stations, and a sewage treatment lagoon. The total bid price of these three projects is about $174,000. Approximately 50% of their sanitary sewer system and primary sewage treatment plant are completed. The total cost of this project is about $144,000, contracts having been awarded in June of this year. Completion of this project is scheduled for March, 1960.

Vader: The interceptor sewers and secondary treatment lagoon now under construction at Vader is to be in operation by October, 1959. This project will cost about $22,000.

Woodland and Castle Rock: These two towns have adequate sewage treatment systems and are not in need of improvements.

Kalama: The improvements needed at Kalama are the separation of storm water and the reduction of infiltration.

The City has stated that very little storm water directly enters their sanitary sewers, but the infiltration problem is quite extensive during the rainy season.

To reduce the amount of infiltration to an acceptable level would require replacing about 2,000 feet of defective sewer line. The City reports that most of the infiltration water passes through the plant and is by-passed only during periods of extremely high flow. Financing for the replacement of the defective sewer is doubtful at this time.

Kelso: The improvements needed by Kelso, as of September, 1958, were continuous chlorination and elimination of raw sewage overflows at the Cowlitz River pump station and the treatment plant during periods of high flow.

A continuous chlorination program was initiated during January, 1959, and will be continued on a permanent basis.

A sewer maintenance and replacement program has within the past two years reduced the by-pass of sewage by 60 per cent. Continuation of this two-fold program by the city will also reduce infiltration to an acceptable level by 1964.

Longview: The improvements needed by Longview in 1958 were storm water separation, infiltration reduction, and increased chlorination of the effluent.

Many openings into the sanitary sewer through which storm water could enter have been repaired during the past year. The only known storm water in the sanitary sewer is from roof drains, and a new sewer ordinance prohibiting such connections is now in effect. The existing illegal connections are being traced out and disconnected.

To reduce the amount of infiltration the City has a continuous maintenance program in operation. In 1958, 800 feet of badly broken and displaced sewer was replaced and 2,000 feet of pipe is on hand and scheduled to replace other sections of sewer lines this year. Chlorine dosage has been increased.

Winlock: The program lists Winlock as needing storm water separation and infiltration reduction.

In the case of Winlock these problems are minor and the resulting pollution is insignificant. The City is, however, maintaining a program of sewer maintenance and repair to keep infiltration at a minimum.

Toledo: Toledo has been contacted by both the Pollution Control Commission and State Health Department and informed of their need to construct a sanitary sewer system and a secondary sewage treatment plant.

The City has submitted an application to the Federal Housing and Home Finance Agency for an "Advance for Public Works Planning", under Public Law 560, 83rd Congress. The Federal Housing and Home Finance Agency then requested that the City present a plan to show that the sewerage project, if undertaken, would be financially feasible. On August 14, 1959 Toledo requested a consultant in mutual securities to prepare a financing plan. After this plan is presented and the planning loan is obtained, the city will retain an engineer to prepare a preliminary engineering report.

Cathlamet: Cathlamet has been listed by the Action Program report as needing interceptor sewers and primary sewage treatment.

The following tentative time schedule on the development of their sewage disposal plant has been submitted to the Pollution Control Commission by Cathlamet:

Financing will be arranged by Spring, 1960;

Final plans and specifications prepared by 120 calendar days after financing arrangements;

Contract awarded by Spring, 1961;

Construction initiated during Spring, 1961;

Plant in operation 180 days after start of construction.

The City has authorized their engineer to update their preliminary engineering report and has requested a Federal Grant under Public Law 660.

INDUSTRIES:

Port of Vancouver: The 1958 report by the State of Washington Pollution Control Commission stated that a large volume of untreated sewage was discharged into the Columbia from the industrial area of the Port of Vancouver.

In March, 1959, the industries and the Port of Vancouver retained an engineering firm to make a preliminary study of the area, covering the installation of a sanitary sewage system. This report was recently received by the industries, and the proper corrective action will be taken in the near future.

Archer-Daniels-Midland, Vancouver, and Continental Grain Company, Longview: The Action Program lists these industries as needing to reduce the solids contained in their grain washing water that is being discharged into the Columbia. During the past year, these industries have employed an engineering firm to make a complete study on grain washer wastes. This report was recently submitted to the industries. These industries will present plans for pollution abatement in the immediate future.

Washington Canners and California Packing Corp., Vancouver: The 1958 report listed these two Vancouver canneries, although seasonal in operation, as contributing 10 per cent of the total nutrients being discharged to the Columbia. Further surveys made in September and October, 1958, indicate these contributions may be insignificant. Definite conclusions will be made as to the effect this waste has on the sphaerotilus problem.

CHAIRMAN STEIN: Do you have any questions, Mr. Everts?

MR. EVERTS: No.

CHAIRMAN STEIN: Mr. Poston?

MR. POSTON: No.

CHAIRMAN STEIN: Mr. Garton

MR. GARTON: Mr. Chairman, that concludes the material prepared for this Conference today from our staff.

Appendix "B".

STATUS OF PROGRESS

STATE OF OREGON

MUNICIPALITIES

August, 1959

1. City of Gresham - - - - no improvements needed

2. Multnomah County Farm - no improvements needed

3. Portland Airport - - - no improvements needed

4. City of Portland - - - as a result of a public hearing held by the Oregon State Sanitary Authority on October 17, 1958, in the matter of sewage and waste disposal by the City of Portland, an order was entered on October 20, 1958, by said authority directing the city to abate pollution in the lower Columbia River. Following a review on February 6, 1959, of a proposed plan submitted by the city in response to said order the Authority, having found the plan unsatisfactory, instituted on March 2, 1959, a suit against the City of Portland, Oregon. On May 4, 1959, the court overruled the city's motion to strike the complaint filed by the Sanitary Authority in the name of the State of Oregon. On June 23, 1959, the defendant filed a demurrer on the grounds that the complaint did not state facts sufficient to constitute a course of action. On July 8, 1959, the Authority instructed its attorney to do everything possible to expedite court action in this matter.

5. City of St. Helens - - primary sewage treatment works with effluent chlorination facilities are under construction and will soon be ready for operation.

6. City of Rainier - - - - new primary sewage treatment works with effluent chlorination completed and placed in operation in June 1959.

7. Clatskanie - - - - - - no improvements needed.

STATUS OF PROGRESS

STATE OF WASHINGTON

MUNICIPALITIES

Name	Population	Treatment Provided	Improvements Needed as of September, 1958	Status as of August, 1959
CAMAS	5,500	Primary and disinfection	Storm water separation	No change
			Replace low-lying trunk serving area to the east	No change
			Increased chlorination effluent	No change
VANCOUVER	40,800	Primary and disinfection	Intercept Fruit Valley Sewer	No change
			Intercept Jantzen Sewer	Project completed
			Intercept 18th Street Sewer and reduce tributary infiltration	Project under design (660 grant requested)
			Storm water separation	No change
			Increased chlorination effluent	No change
BATTLE GROUND	966	None	Sanitary Sewer System	Under construction
			Secondary Sewage Treatment Plant	Under construction
RIDGEFIELD	840	None	Sanitary Sewer System	Under construction
			Primary Sewage Treatment Plant	Under construction

STATUS OF PROGRESS

STATE OF WASHINGTON

MUNICIPALITIES

Name	Population	Treatment Provided	Improvements Needed as of September, 1958	Status as of August, 1959
WOODLAND	1,340	Primary and disinfection	None	Note: Earlier references to needed improvements for Woodland were based on erroneous information. There is a possibility, however, that some poor sewers exist which should be replaced or repaired.
KALAMA	1,079	Primary and disinfection	Storm water separation	No change
			Infiltration reduction	No change
KELSO	8,900	Primary and disinfection	Continuous chlorination	Accomplished
			Storm water separation	Stage construction in progress
			Treatment plant improvements	Under advisement by City Engineer
			Increased pump capacity for pressure line under Cowlitz River	Improved maintenance has reduced problem to acceptable level.

STATUS OF PROGRESS

STATE OF WASHINGTON

MUNICIPALITIES

Name	Population	Treatment Provided	Improvements Needed as of September, 1958	Status as of August, 1959
LONGVIEW	23,400	Primary and disinfection	Increased chlorination effluent	Operators working on plant to accomplish.
			Infiltration reduction	Routine sewer maintenance will accomplish.
			Storm water separation	New sewer ordinance will alleviate.
CASTLE ROCK	1,350	Secondary and Disinfection	None	- - - - - - -
TOLEDO	500	None	Sanitary sewer system Secondary sewage treatment	Engineer retained to prepare preliminary engineering report.
VADER	402	Secondary and disinfection	Interceptor sewers	Project completed.
			Secondary sewage treatment	Project completed.
WINLOCK	975	Secondary and disinfection	Storm water separation	No change
			Infiltration reduction	Routine sewer maintenance will accomplish.

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Appendix "B"

STATUS OF PROGRESS

STATE OF WASHINGTON

MUNICIPALITIES

Name	Population	Treatment Provided	Improvements Needed as of September, 1958	Status as of August, 1959
CATHLAMET	625	None	Interceptor sewers Primary sewage treatment	Preliminary engineering report updated and 660 grant requested. Engineer authorized to prepare construction plans and specifications.
ILWACO	587	None	Primary sewage treatment	660 grant still in effect. Council arranging necessary financing. Project to be under contract by Dec. 31, 1959.

Appendix "B"

Appendix "C"

STATUS OF PROGRESS

STATE OF OREGON

INDUSTRIES

August, 1959

1. Portland Union Stockyards - has installed new primary sewage treatment plant and effluent chlorination facilities.

2. Portland Livestock Exposition Building - has installed new primary sewage treatment plant and effluent chlorination facilities.

3. St. Helens Pulp and Paper Co. and Kaiser Gypsum Co. at St. Helens - investigation of pollution control measures needed by these two industries underway.

4. Reynolds Aluminum Co. - no improvements needed.

STATUS OF PROGRESS

STATE OF WASHINGTON

INDUSTRIES

Name	Location	Product	Improvements Needed As of September, 1958	Status as of August, 1959
Crown Zellerbach	Camas	Pulp & Paper	Elimination of nutrients causing deleterious sphaerotilus growths	No change. Research continuing. Participating in expanded survey of Lower Columbia River.
Columbia River Paper Mills	Vancouver	Paper	Elimination of nutrients causing deleterious sphaerotilus growths	No change. Participating in expanded survey of Lower Columbia River.
California Packing Co.	Vancouver	Canned Fruit	Elimination of nutrients causing sphaerotilus growths	No change. Surveys indicate contribution may not be significant.
Washington Canners	Vancouver	Canned Fruit & Vegetables	Elimination of nutrients causing deleterious sphaerotilus growths	No change. Surveys indicate contribution may not be significant.
Archer-Daniels-Midland	Vancouver	Grain	Reduction of solids content of grain washing wastes	No change. Plan for needed improvements under advisement at this time.
Longview Fibre Co.	Longview	Pulp & Paper	Elimination of nutrients causing deleterious sphaerotilus growths (Significance of Kraft mill effluent not definitely defined)	No change. Participating in expanded survey of Lower Columbia River.

STATUS OF PROGRESS

STATE OF WASHINGTON

INDUSTRIES

Name	Location	Product	Improvements Needed As of September, 1958	Status As of August, 1959
Continental Grain Company	Longview	Grain	Reduction of Solids, content of grain washing wastes	No change. Plan for needed improvements under advisement at this time.
Weyerhaeuser Timber Co. Pulp Division	Longview	Pulp	Elimination of nutrients causing deleterious sphaerotilus growths (Significance of Kraft and MgO mill effluents not clearly defined)	No change. Participating in expanded survey of Lower Columbia River.
Industries in Terminal No.2 Area	Port of Vancouver	----	Sanitary Sewers Primary sewage treatment	Engineering Report Completed

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Appendix "C"

CHAIRMAN STEIN: Thank you, Mr. Garton. We will now call on Mr. Everts for progress in Oregon.

Mr. Everts.

MR. EVERTS: Mr. Chairman, I would like to ask Mr. Kenneth H. Spies, Deputy State Sanitary Engineer, to report on the progress which has been made by both municipalities and industries in Oregon in connection with the matter of pollution in the interstate waters of the Lower Columbia River.

Mr. Spies.

MR. SPIES: Mr. Chairman, conferees, and gentlemen: Expanding on the information given in Appendices B and C for the state of Oregon, the city of Gresham, as reported at the first Conference, has a primary treatment plant in operation designed for a population of 10,000 and serves at the present time some 4,000 people. Since the first session of this Conference there have been numerous additions or extensions to the sewer system. The operation of this plant continues to be satisfactory.

The other plants include the Multnomah County Farm and Wood Village, two small plants, both providing complete treatment for populations of 500 and 850 people, respectively. Operation of these two plants continues to be satisfactory.

At the Portland Airport, primary treatment is provided for a population of some 3,000 persons. This includes chlorination. All of these plants that I have mentioned to date thus far include chlorination of the effluent. The Portland Airport plant also serves the International Airport.

The City of Portland: At the first Conference this city was indicated to be the major source of bacterial contamination in the Lower Columbia River. Following that first Conference a public hearing was held in the matter of sewage disposal by the City of Portland, Oregon, by the Oregon State Sanitary Authority on October 17, 1958. Based on findings of fact and evidence submitted at that hearing, an order was entered against the City requiring that the City abate pollution in both the Willamette and the Columbia Rivers, and

instructing them toward that end to, within ninety days, submit to the Authority an acceptable fiscal and construction program. On February 6, 1959, the proposed plan submitted by the City of Portland was reviewed by the members of the Oregon State Sanitary Authority and was found to be unacceptable.

On March 2, 1959, a suit was filed in the Circuit Court of Multnomah County against the City of Portland by the Sanitary Authority asking the Court to enjoin the City of Portland from polluting the Columbia and Willamette Rivers. On May 4th of this year the Circuit Court overruled the City's motion to strike the complaint filed by the Sanitary Authority. On June 23rd of this year the defendant filed a demurrer on the grounds that the complaint did not state facts sufficient to constitute a course of action and alleging that certain portions of the Sanitary Authority Act under which the action was taken are unconstitutional. On July 8, 1959, the Sanitary Authority members instructed their attorney to do everything possible to expedite this court case. It now appears that the hearing on the demurrer filed by the defendant will be argued before the Court the latter part of this month. It has been reported to us that if the defendant loses this action, the matter will be referred or appealed to the Supreme Court of the State of Oregon.

Within the last few days it has been reported that the City has retained consulting engineers to make a study of their sewage disposal needs and to advise the City as to how to proceed to abate pollution both in the Columbia and Willamette Rivers.

For the city of St. Helens, construction of a primary sewage treatment plant is progressing and those facilities should be in operation within the next sixty days.

Since the first session of this Conference, the city of Rainier has completed and placed into operation a primary sewage treatment plant, including effluent chlorination.

The city of Clatskanie, as reported at the first session, has a primary sewage plant in operation, including effluent chlorination.

Within the last year the Portland Union Stockyards have installed primary sewage treatment and effluent chlorination and has separated the domestic sludge from the liquid

waste from the stock pens. At the Portland Livestock Exposition Building, located adjacent to the main Columbia River, a primary sewage treatment plant with effluent chlorination has been provided.

That concludes the statements for the State of Oregon.

CHAIRMAN STEIN: Thank you. Mr. Garton, do you have any questions or comments?

MR. GARTON: No questions.

CHAIRMAN STEIN: Mr. Poston?

MR. POSTON: No questions.

CHAIRMAN STEIN: Mr. Everts?

MR. EVERTS: I have none. That concludes our statement, Mr. Chairman.

CHAIRMAN STEIN: We will move on to the next point in the agenda. You will recall that as part of the conclusion of the first session of the Conference, both Washington and Oregon agreed to jointly undertake an Action Program to control water pollution in the Lower Columbia River. It is my understanding that such a program has been developed. This program has been distributed, and, as I understand it, the formulation of it has been edited somewhat for purposes of clarification, and the edited portion will now be read by the executive secretary of the Conference, Mr. Gerald Hansler.

Mr. Hansler.

MR. HANSLER: The Action Program is based upon (1) the legitimate water uses in the Lower Columbia River, and (2) the quality of water needed for those uses. These are discussed in the following two subsections. Specific action in terms of municipal and industrial pollution control and the timing of such action is discussed in the third subsection.

Legitimate Water Uses - Lower Columbia River

The legitimate water uses of concern in developing

the Action Program are those interfered with or endangered by pollutants originating through municipal and industrial activity. The record of the first Conference indicates that these uses are:

(1) Public water supply.
(2) Commercial uses including commercial fishing.
(3) Recreational uses including sport fishing.

Water Quality Needed to Serve Legitimate Water Uses

In order to conserve the waters of the Lower Columbia River for the specified legitimate water uses, limits must be established for the following:

(1) Bacteria (Coliform)
(2) Solid materials discharged by municipal or industrial operations.
(3) Sphaerotilus.
(4) Toxic, colored, or other deleterious substances.

Bacteria (Coliform): The limit of Coliform bacteria is as follows:

Bathing, swimming and water skiing areas:
A representative number of samples should average less than 240 per 100 milliliters and should not exceed this number in more than 20 per cent of samples examined, when associated with domestic sewage.

Other recreational use (including boating) and commercial areas: A representative number of samples should average less than 1000 per 100 milliliters and should not exceed this number in more than 20 per cent of the samples examined, when associated with domestic sewage.

Sources of public water supply:
Coliform limits established for the above areas will satisfy the requirements for sources of water supply for public use if provision is made for conventional water treatment (coagulation, sedimentation, filtration, chlorination).

Solid materials discharged by municipal or industrial operations: The limit of such material is as follows:

Substances alone or in combination with other substances or wastes, in sufficient amounts or of such nature as to make receiving waters unsafe or unsuitable for specified legitimate uses.

The above specified water quality limits are aimed at the particular problems outlined at the first session of the Conference, September, 1958. It is expected that any new problems arising in the future will be effectively controlled by the water pollution control agencies of the states, including the establishment of additional water quality limits. The federal government will provide support to aid in solving future problems if necessary.

Municipal and Industrial Pollution Control Requirements

The following action programs, including specifications of time, are established for municipalities and industries:

Municipal: All municipalities in Oregon and Washington situated on the Lower Columbia River from Bonneville Dam to Cathlamet, Washington, or situated immediately adjacent thereto so as to produce an effect not consistent with the water quality requirements specified herein, shall take effective action to construct sewage treatment works comprising not less than primary treatment and effective disinfection as follows:

A. Projects involving the institution of effective disinfection or minor plant and operation improvements.

   (1) Work to be completed and in operation by July 1, 1960.

B. Projects involving major construction.

   (1) Financing arranged not later than June 1, 1960.

   (2) Final plans and specifications prepared not later than June 1, 1960.

   (3) Contract awarded not later than August 1, 1960.

(4) Projects in operation not later than July 1, 1961.

Industrial: All industries in Oregon and Washington situated on the Lower Columbia River from Bonneville Dam to Cathlamet, Washington, situated immediately adjacent thereto, or involved in operations so as to produce an effect not consistent with the water quality requirements specified herein, shall take effective action to reduce pollution produced by them in order to achieve the water quality specified.

Each state will assess the status of each industrial establishment with respect to its pollution problem. In doing this, each State will require each industrial establishment to submit a report in triplicate within 60 days after the date of the second session of the Conference indicating how the establishment proposes to:

(1) Control pollution through inplant or process changes, by-products recovery, or other equivalent methods.

(2) Control pollution through the construction of treatment processes, and disposal methods, or other equivalent methods.

Action to reduce pollution through inplant or process changes, by-products recovery or other equivalent methods will be instituted immediately upon submission of the report. Dates of completion of such activities will be specified in the report including information on the dates of completion of all specific segments of such activity.

Action to control pollution through treatment processes, disposal methods, or other equivalent methods, will be completed and placed in operation not later than March 1, 1961. Dates of completion of such activities will be specified in the report including information on the dates of completion of all specific segments of such activity.

If, in the light of the above program, any additional knowledge is needed on the part of an individual industrial establishment, a supplementary report and a request for a time extension will be submitted within 60 days of the second session of the Conference. This report will outline

the nature of the problem, specify in detail the character and aims of studies and investigations under way or to be undertaken, list the resources to be applied to such studies and investigations, and indicate the progress, if any, made to date. If such request is granted, the studies and investigations will be undertaken at a level sufficiently high to anticipate a reasonable solution in not more than one calendar year from the date of submission of the supplementary report. The supplementary report will specify the date of completion of such studies and investigations. Upon completion of these studies and investigations, a time schedule will be established for the institution of pollution control methods or facilities.

Each municipality and industrial establishment will provide a report in triplicate to its State Water Pollution Control Agency at not less than three-month intervals of progress made in carrying out this action program. Each state will provide to the conferees a quarterly report of progress with respect to its municipalities and industrial establishments.

The editorial changes which have been made on this Action Program, as agreed upon by the conferees yesterday, have been underlined by dots. On page 4 there are several phrases which have not been underlined, but where changes have been made, these are, "and a request for a time extension" -- that's line three. In line four, "within 60 days of the second session of the Conference"; line nine, "If such request is granted." And in the final paragraph, in the first sentence, "municipality"; in the final sentence, "industrial establishments."

CHAIRMAN STEIN: I understand the microphone is dead, and I am asking the conferees to speak up. This won't bother me, but it may bother some other folks.

Will any of the conferees have any comments on the Action Program?

Mr. Garton?

MR. GARTON: No comment.

THE CHAIRMAN: Mr. Everts?

MR. EVERTS: I have no comment.

CHAIRMAN STEIN: Mr. Poston?

MR. POSTON: I have no comment.

CHAIRMAN STEIN: With that, we will proceed to the next portion of the agenda and ask Mr. Everts to introduce persons from Oregon having statements to make.

MR. EVERTS: Mr. Chairman, yesterday we received a written statement from the Fish Commission of the State of Oregon, and I would like to ask Mr. Spies to read that into the record on behalf of the Fish Commission.

CHAIRMAN STEIN: Mr. Spies.

MR. SPIES: Mr. Chairman and conferees, this is a statement presented by the Fish Commission of the State of Oregon, and it's signed by Mr. Albert M. Day, State Fisheries Director. It reads as follows:

"Let me first offer our overall support of the recently submitted Action Program to Control Pollution in the Lower Columbia River between Bonneville Dam and Cathlamet, Washington, which was developed through the efforts of the states of Oregon and Washington and the United States Public Health Service. It is a bold program and, if carried to its completion, will result in much improved river conditions for the well-being of our runs of anadromous fish and the fisheries that operate on them. In these days of increasing human population and related industrial growth, tremendous pressures are being placed on the remaining stocks of anadromous fish in the Columbia River system. We are doing our utmost from a management standpoint to perpetuate these fish populations, but all of our efforts will be in vain if conditions of water quality are not maintained at a level which will support fish and related aquatic life.

"I have several comments for your consideration which are intended to be constructive. In studying the Action Program it became immediately evident that only passing inference was made to the use of water by fish and related aquatic life. The three legitimate water uses stated in the program are (1) public water supply, (2) commercial uses including commercial fishing and (3) recreational

uses including sport fishing. Perhaps the parties who drafted the report felt that the wording was adequate and included the maintenance of conditions which will support fish and aquatic life, but in fact it is only inferred that such requirements are taken into consideration. It is quite possible that water quality of the Columbia River would be satisfactory to permit fishing but would be unsatisfactory from the standpoint of enabling fish and aquatic life to survive. The reverse could be true under other conditions of water quality.

"It is respectfully suggested that consideration be given to either (1) adding fish and aquatic life as a fourth legitimate water use or (2) expanding by definition, the existing legitimate water uses listed to include maintenance of fish and aquatic life.

"A second matter which we ask be taken into consideration is the relative merit of deciding each pollution complaint or problem on the related facts of the problem as opposed to establishing minimum water quality standards. If a continual monitoring program is established to measure the various parameters of water quality, then it should be a relatively easy matter to judge the resultant effect on the legitimate water uses. However, if no continual monitoring program is carried out, there might be some merit in establishing arbitrary minimum water quality standards. A violation of the minimum standard would then automatically denote pollution.

"The opportunity to comment on the proposed Action Program is greatly appreciated. Again let me offer the Fish Commission's wholehearted support to the program's objectives."

End of statement.

CHAIRMAN STEIN: Thank you, Mr. Spies. Do you have any questions or comments, Mr. Garton?

MR. GARTON: No questions.

CHAIRMAN STEIN: Mr. Poston?

MR. POSTON: No questions.

CHAIRMAN STEIN: Mr. Everts?

MR. EVERTS: No questions.

CHAIRMAN STEIN: Will you continue, Mr. Everts?

MR. EVERTS: Thank you, Mr. Chairman. There is a representative from the Oregon State Game Commission present who would like to make a verbal statement.

MR. BOROVICKA: Robert L. Borovicka, Oregon Game Commission.

It is my understanding that the Oregon Game Commission will submit a formal statement with regard to this Conference. I have a few notes that I would like to present at this time. The Oregon Game Commission is in agreement and will support the objectives of the Action Program to control pollution in the Lower Columbia River. Of particular interest is the action necessary to control pollution as it affects sport fishing. This includes slimes, toxic and colored, and other substances that inconvenience and harm sport fishing effort and success. Sport fishing is pursued by both boat and shore fishermen that have close contact with the water, and for this reason it is important with regard to bacteria count in the river. Effluents discharged in the river that have immediate or long-range harmful effect on all species of game fish are of primary concern to the Oregon Game Commission.

These are a few points, and I am sure that the statement will be made, or formal statement that will be submitted, will elaborate on these and include more detail. Thank you.

CHAIRMAN STEIN: Thank you. Do you have any questions?

MR. GARTON: No questions.

CHAIRMAN STEIN: Mr. Poston?

MR. POSTON: No.

CHAIRMAN STEIN: Mr. Everts?

MR. EVERTS: I have none.

CHAIRMAN STEIN: Thank you.

Mr. Everts.

MR. EVERTS: Mr. Chairman, I would like to now call on Mr. H. O. Bresee, who is a regional vice-president of the Oregon Wildlife Federation and who is also chairman of their water and pollution abatement committee. With the conferees' permission, I would also like to permit Mr. Bresee to make a statement on behalf of Mr. Stewart of the Milwaukie Rod and Gun Club.

CHAIRMAN STEIN: Without objection that will be done.

Mr. Bresee.

MR. BRESEE: Mr. Chairman and conferees: As stated a year ago before this Conference, the Oregon Wildlife Federation is very much concerned with the polluting of our waters. We had hoped to see this program develop more rapidly than it has, with the exception of some of the smaller municipalities which are making progress with the help of federal grants in aid.

It is regrettable that a suit against the City of Portland had to be instituted by the Oregon Sanitary Authority. This is the same city that expects its citizens to comply with its laws, yet chooses to violate the state laws on sanitation. Perhaps if the city had recognized the importance of proper disposal of its waste, it would have been placed on the ballot as a separate issue. How the city can overlook the value and health factor of clean water for recreation is a disgrace to all of us.

Industry, with the pulp and paper mills in particular, has been one of the major polluters of our waters since 1926. They are still doing nothing but asking for time for extended surveys. We believe that the time for surveys has been pressed to the limit. Are we to believe that they have reached the extent of their progress? We as citizens must provide for our sewer systems and plants. Industry should provide plants to return that water which they use back to the rivers in a reasonable state of purity for the fishery and recreation.

One cannot help but note the similarity of "no change in status"and "no improvement" being made by industry in your Action Program. Industry should not be interested only in profits but should recognize the health hazards and problems they create for others by their lack of regard for their waste disposal.

After reading your Action Program, we are more convinced than ever that this program should be conducted under Public Law 660 by the United States Department of Health, Education and Welfare, as it is quite evident that industry is not cooperating as much as we think possible when it is left to state enforcement.

We wish to thank the conferees for the privilege of appearing before them and wholeheartedly support a vigorous program of pollution control.

This is the statement that I have from Mr. Stewart. He was unable to be here.

"U. S. Public Health Service, in regards Correction of Pollution problems in the Willamette and Columbia Rivers.

"Milwaukie Rod and Gun Club represents about 500 sportsmen of the area in Clackamas and south Multnomah Counties. Its aims include the preservation and enhancement of fish and wildlife resources and preservation of water and other resources in a condition to provide as nearly as possible optimum use by and for fish and wildlife and the general public.

"The polluted condition of the Willamette and Columbia Rivers has become an increasingly severe problem, in spite of efforts to date by the Oregon Sanitary Authority and the comparable agency of the State of Washington. We can foresee a major loss of utility of these two streams if improvements are not realized in the near future.

"We are aware of the Action Program recently issued by the U. S. Public Health Service and feel that it is a step by the right direction. We question, however, the length of time involved therein before actual reduction in pollution will be achieved. We feel that more rapid action is imperative. Nevertheless, we do not believe that any industry

need be shut down to effect an improvement. However, we believe that no new industry should be allowed to initiate operations which might add to the present pollution load, without approved facilities for control of waste products and assurance that use of such facilities will be a part of the operating plant.

"We ask if there is any proven means of reducing or eliminating paper mill waste pollution? We believe that other countries have found means of accomplishing that end. We ask rapid action to force, if need be, the initial diversion of sufficient income from the paper industry to effect a cure, plus the permanent and continuing use of such portion of income as may be necessary to maintain and operate corrective works. We further ask that comparable action be taken by other industries and by municipalities which now, or in the future, may contribute to the pollution of our interstate waters.

"The recreation industry, which depends in a large measure on ample supplies of clean water, is a major factor in the economy of the States. An expedited and perhaps strengthened Action Program is the only means of regaining and preserving conditions suitable for that industry as well as for the general public.

"We believe that our request for expedited action in this matter is reasonable and in the best interest of the States of Oregon and Washington and the nation as a whole.

"Respectfully submitted, Don Durland, President, and W. H. Stewart, Pollution Committee, Chairman."

CHAIRMAN STEIN: Thank you, Mr. Bresee. Any questions?

MR. GARTON: No questions.

CHAIRMAN STEIN: Mr. Poston?

MR. POSTON: I have no questions.

CHAIRMAN STEIN: Mr. Everts, you will leave copies of those statements with us, please?

MR. EVERTS: Yes.

CHAIRMAN STEIN: Mr. Everts.

MR. EVERTS: Mr. Chairman, it is my pleasure to present Mr. William Westerholm, the executive secretary of the Columbia River Fishermen's Protective Union, who will make a statement, as well as Mr. William Puustinen, who will also make one. I don't know what arrangements you fellows have, who is going to speak first, but that is something you can work out for yourself.

MR. WESTERHOLM: Mr. Everts, my statement will be read by a representative from Vancouver, Washington, and I will concur with the statement.

MR. EVERTS: That's fine.

Mr. Chairman, this is Mr. William Puustinen.

MR. PUUSTINEN: Mr. Chairman and conferees, I am William Puustinen, chairman of the Legislative and Conservation Committee of the Columbia River Fishermen's Protective Union at Astoria, Oregon.

On August 25, 1959, we filed with the Oregon State Sanitary Authority a letter, and I will read you the statement of the letter:

"Attention having been called to the forthcoming Conference, September 3, 1959, of the Oregon, Washington and Federal agencies, now working on the Action Program to control pollution of the lower-Columbia River, we the Columbia River Fishermen's Protective Union, wish to file this letter with you.

"First we wish to express to the Oregon Sanitary Authority, the Washington Pollution Control Commission, and the United States Department of Health, Education and Welfare our sincere appreciation for the aid and cooperation in organizing this Columbia River pollution control program from the period of our own early legal actions in 1935 to the present very efficient machinery of the joint Oregon, Washington and Federal agencies.

"We can now begin to view with some relief this great task of cleaning up the Columbia.

"We have great faith in the efficiency of this machinery and in the dedicated personnel working so cooperatively from their separate official positions to achieve a perament solution to our Columbia pollution. This is truly a great public service.

"The objectives of this Action Program are excellently detailed and we heartily endorse all points, as far as they go.

"However, we would like to suggest that in the arrangements of standards of water quality, as set forth under the Action Program on Page 2, under the limits set for coliform bacteria of not more than 240 per 100 milliliters for bathing, swimming, and water skiing areas, this same consideration be extended to our commercial fishermen.

"We feel that fishermen working bare-handed to their elbows during the entire time of hauling in their nets from the water are subject to the same infections as bathers, swimmers and skiers. We have already had skin burns and infections we feel were due to no other cause than excessive pollution of the water.

"Even our faces are exposed by wave and fish splashes to water-carried infections.

"Also we wish to emphasize our need for cleaner water from toxic pollutants, deteriorative bacteria, and plain general filth for the harvesting of healthful fish foods from our great river.

"We wish to point out that fish require careful sanitary handling, particularly after killing. When we take the fish from the river and use the same river water also in washing out our boat fish lockers, any excess amount of deteriorative bacteria or excess amounts of dangerous chemicals can bring on earlier discolorations, deterioration, and contamination of the fish.

"We would like to avoid any suggestion of a water-caused contamination or deterioration of the salmon, shad, sturgeon, crawfish, clams and crabs we harvest for the food uses of the great non-fishing majority of our general public.

"Respectfully submitted, Columbia River Fishermen's Protective Union."

Now, Mr. Chairman, since writing this letter I have thought that perhaps I should call the committee's attention to two other points that we have noticed in the fishery that are, according to our thinking, paralleled by the increasing pollution in the Columbia. One is the sickened condition of the sturgeon that we have caught in our nets in the last few years. Many of these sturgeon are in the last stages of either starvation or chemical disorders caused by what we think come from the pollution factors in the river. We have no laboratory tests yet to prove our thoughts on that line, but the parallel seems to be strong that the sickening or the dying or the starving, whichever it may be, of the sturgeon is paralleling the increasing volume of pollution in the Columbia River below Bonneville. We do not find these same sturgeon sickening or dying above Bonneville, so obviously it must be a condition developing probably in the pollution area, as best we can understand.

Now to point out another factor, we noticed that many years ago the Columbia River was full of flounder, and other bottom-living fish. Today we have very few flounders in the Columbia River and they, too, probably are dying because of the factors of the pollution in the Lower Columbia.

So we wish to call those to your attention also and thank you very much.

CHAIRMAN STEIN: Thank you, Mr. Puustinen. Are there any questions?

MR. GARTON: No.

CHAIRMAN STEIN: Mr. Poston?

MR. POSTON: None.

CHAIRMAN STEIN: Mr. Everts?

MR. EVERTS: No.

CHAIRMAN STEIN: Will you call your next participant, Mr. Everts?

MR. EVERTS: Do you have any further statements to be made on behalf of the Columbia River Fishermen's Protective Union, Mr. Westerholm?

MR. WESTERHOLM: No. It will be read by the Washington side.

MR. EVERTS: Okeh. Thank you.

Mr. Schenck, who is here in behalf of the Columbia River Sportsman's Council, I believe, has asked to appear and make a statement.

Are you prepared to do that at this time?

MR. SCHENCK: I am C. C. Schenck of the Columbia River Sportsman's Council, and I have been more or less active in this pollution control fight since between 1930 and 1933. It's been a good many years.

To the Conferees: Oregon Sanitary Authority, Washington Pollution Control Commission, U. S. Public Health Service.

Gentlemen: The action program outlined following the session of September 10 and 11, 1958 is interesting and enlightening to newcomers in the effort to eliminate pollution.

Is there anything exposed we did not know when this effort started some 25 or 30 years ago? Then our rivers were fairly clean. While fishing at Oregon City as late as 1926, your complainant satisfied his thirst by simply drinking from the river. Swimming was general clear to Portland Harbor. Many can remember Bundys at the lower end of Ross Island -- a public bathing beach, which was closed to swimming by health authorities some time prior to 1926. The water was not fit to swim in.

Appendix A looks pretty good and speaks well for the Oregon Sanitary Authority's influence except for the pitiful situation in Portland.

Appendix B - no change, no change, under construction. Grant under Public Law 660 requested or operating make a fairly good report.

Appendix C - "no change. Participants in research."

Thirty years of effort to clean up our rivers and keep them clean. Then 30 years of delay, investigations, studies and political confusion.

Twenty-five years of work by citizens who have no financial gain in view, only a desire to provide clean water for the coming generations, many of whom are now grown and are taking part in the effort.

Twenty-five years of evading the intent of the law, which, if stated simply, meant -- "Clean up and keep clean our polluted waters."

It would seem most of the study and investigation was to increase the efficiency of the plant for more profit from the waste rather than to remove a nuisance.

Over 20 years of free use of our rivers as an open sewer -- acids, pulp, oil, human waste, slaughter house waste, and even siltation from poor agricultural practices. We knew of the condition of the Beautiful Ohio, the Missouri, and the Potomac; we knew prevention was farless expensive than the cure, and yet there are these who still object to securing clean water for the use of all.

Our Oregon Sanitary Authority may refuse a permit to an industry because pollution disposal must meet certain requirements. Neighboring states may then seek that industry promising temporary permits, renewable yearly. Then industry, after making its initial investment may, by providing a few thousand dollars a year for research or study, continue indefinitely.

The fight is extended another 25 or 30 years, mostly at public expense to eliminate a blight which should not have been allowed in the first place.

We must give credit to those of industry who have taken a small percentage of their profits and really cleaned up.

We must give credit to the municipalities who have, using Public Law 660 grants plus their own funds, acceded

to the orders of the Sanitary Authority and cleaned up.

At the same time, we must criticize those who are evading or delaying tactics to defeat the intent of the law -- be it income tax or pollution.

Delay only means added cost and more problems. It gives an unfair advantage to those who do not comply with the law over those who do willingly or otherwise.

We feel enough time has passed, enough laws have been enacted, enough power has been vested in authoritative bodies, that this action program to pollution control of the Lower Columbia River should be resolved immediately. C. C. Schenck, Secretary.

CHAIRMAN STEIN: Thank you, Mr. Schenck. Do you have any questions or comments, Mr. Garton?

MR. GARTON: No.

CHAIRMAN STEIN: Any questions or comments?

MR. POSTON: I have none.

CHAIRMAN STEIN: Thank you for your statement.

Mr. Everts.

MR. EVERTS: Mr. Chairman, Mr. Dunlap, representing the State Parks Department, is present. Do you wish to make a statement at this time?

MR. DUNLAP: Mr. Chairman, conferees, gentlemen: My name is R. C. Dunlap. I am with the Oregon State Parks. The Oregon State Parks entered a statement at the first Conference pertaining to the recreation value of the Lower Columbia River. We have no other comment to make at this time other than to say that we were pleased to note in the Action Program that has since developed that it was determined that recreational use of the river was one of the legitimate water uses interfered with or endangered by pollutants, and also that water quality standards, including bacteria quantity limits were established in the pollution control program.

As an agency interested in the full utilization of our recreational resources, we are naturally very interested in seeing that this program is carried to a successful conclusion. Thank you.

CHAIRMAN STEIN: Thank you, Mr. Dunlap. Any comments or questions?

Thank you. Mr. Everts.

MR. EVERTS: Mr. Chairman, at this time I would like to inquire whether there are any other representatives of groups or agencies from the state of Oregon who wish to make a statement at this time?

If there are none, I should like to point out that in connection with the action program which has been proposed by the states of Washington and Oregon and the Public Health Service, in connection with this Conference, that parts of the Action Program relating to municipalities affect the city of Portland in two areas. As you all recall at the last Conference, effective bactericidal treatment of the effluent from the Portland sewage treatment plant was one of the needs for the abatement of bacterial pollution of the Columbia River. In this Conference, and on the action program, I think it should be remembered that the conferees have indicated that work of that kind should be completed and the facilities placed in operation by July 1st of 1960.

The city of Portland also has another problem relating to the pollution of the Willamette River in Portland Harbor, which requires major construction undertakings in the way of the construction of sewage treatment works and interceptor sewers, and part B of the time schedule, which requires that projects of this nature be constructed and placedin operation by not later than July 1st, 1961, would apply in that case.

At this time, and for the record, I would like to inquire, Mr. Chairman, whether there is any representative from the City of Portland who would like to comment on that time schedule at this time.

There being none, that will conclude the statements to be made on behalf of the state of Oregon at this morning's session, and with Mr. Garton's permission, at the afternoon

session there will be the representative of one other agency who will appear, and I should like to have him present his statement at that time, if it's agreeable with the other conferees.

CHAIRMAN STEIN: Thank you, Mr. Everts. Before calling on Mr. Garton, I would like to outline our tentative schedule. It's been suggested that we continue until eleven-thirty and then adjourn for lunch so that we can beat the rush, and reconvene at one o'clock.

We will now call on Mr. Garton for his participants in this Conference.

Mr. Garton.

MR. GARTON: Thank you, Mr. Chairman. Gentlemen, if that be the schedule for the day, I think it appropriate, because of previous requests from people who are confronted with a problem -- travel schedules and so forth -- that we call on industry first and then on to government agencies and other people living more locally here in the vicinity. So first I would call, with permission of the Chairman, Mr. Baker of Weyerhaeuser Company.

MR. BAKER: Mr. Chairman, conferees, and gentlemen: My name is R. E. Baker. I am manager of Pulp and Paperboard Manufacturing for Weyerhaeuser Company. As operator of pulp and paperboard mills at Longview, Washington, we are here today to present our view on the "Action Program to Control Pollution in the Lower Columbia River."

We operate our Longview facilities under Waste Discharge Permit 679, issued by the Washington Pollution Control Commission. The issuance of this permit involved a determination by the Commission that we are using "all known available and reasonable methods" to prevent and control pollution. At the first session of this Conference we described in detail the action we had taken in order to qualify for this permit. We are unaware of any available and reasonable control methods that have been developed since the issuance of our permit. Consequently, we fail to see what further action might reasonably be expected of us at this time.

Further action would serve no purpose because we are not causing damage to other legitimate water uses in the

Columbia. Our own conviction as to the absence of such damage is confirmed by the issuance of our permit, which is predicated upon a finding by the Commission that we are not unduly polluting the waters of the state.

We interpret the remarks of Mr. Stein, appearing at page 106 of the transcript of last year's hearings, as confirming our opinion that the determination by our State Commission is binding in these proceedings. At that session we questioned the adequacy of Mr. Kittrell's "evaluation" of pollution because he failed to give any recognition in his report to the following standards recognized in Public Law 660:

> First, the adequacy of measures taken toward abatement of the pollution (Sec. 8(c)(3)(B));
>
> Second, the practicability and the physical and economic feasibility of securing abatement of any pollution (Sec. 8(g)).

Mr. Stein pointed out that these matters are left to the official state board or agency. The issuance of the permit above referred to would seem to constitute the official determination contemplated by Mr. Stein.

Based upon our understanding that this is not a formal proceeding, but merely an informal conference, we think it appropriate to volunteer certain comments on the "Action Program".

First, the receiving and dispersal of industrial effluents is not included in the list of legitimate water uses appearing on page 2 of the Action Program. This water use is recognized by both common law and by the Washington Pollution Statute as a legitimate use.

Second, we note that the conferees recognized last year:

> "That delays in solution of the slime problem caused by industrial waste may be due to (1) inadequeate knowledge of stream conditions which must be maintained to deter the growth of slimes and (2) possibly the lack of a perfected method to control such wastes;".

The inadequacy of knowledge recognized by the conferees must be remedied if an Action Program is to serve the purpose of eliminating or minimizing objectionable conditions. We note that in Appendix B it is observed with respect to our company that the "Significance of Kraft and MgO mill effluents is not clearly defined". From this we infer that the deficiency in knowledge has not yet been remedied.

We are aware of the continuing interest taken by the Public Health Service in these problems. With the unsurpassed research facilities and personnel available to the Public Health Service, we expect that you can help to develop answers to the following questions, among others:

1. What are the nutrients contributing to the growth of slime?

2. To what level must the various nutrients be reduced to provide satisfactory conditions?

3. To what extent must other organic and inorganic wastes, including agricultural return and drainage waters and municipal wastes, be reduced if control of industrial effluent is to have any effect?

When these questions are answered, I can assure you that we will use all "known available and reasonable methods" to implement the answers.

Thank you.

CHAIRMAN STEIN: Thank you, Mr. Baker. Do you have any questions, Mr. Poston?

MR. POSTON: I have none.

CHAIRMAN STEIN: Mr. Everts?

MR. EVERTS: I have none.

CHAIRMAN STEIN: Mr. Garton?

MR. GARTON: No.

CHAIRMAN STEIN: Thank you, Mr. Garton.

MR. GARTON: Thank you, Mr. Baker. The next gentleman I would like to call on would be Mr. Butler from Crown Zellerbach Company.

MR. BUTLER: Mr. Chairman and conferees: My name is R. A. Butler and I am the Resident Manager of the Crown Zellerbach Corporation plant at Camas, Washington.

Three and a half years ago my company working with the Washington Pollution Control Commission began an intensive river study to determine the precise elements which generate slime growth in the Columbia. Through this study we hoped to develop data that would guide us into the formulation of a program for control of slime. Since that time this study has been carried on under the guidance of Dr. E. J. Ordal, Professor of Microbiology, School of Medicine, at the University of Washington.

In addition to producing a great deal of useful information on the characteristics and growth patterns of slime, this coordinated state and company study has added immeasurably to our knowledge of the 14-mile stretch of river below Washougal. The well documented and up-to-date data obtained on water temperatures, velocity, oxygen content, chemical components and biological aspects of the river between Washougal and Vancouver should have great and continuing value. We are prepared to carry on this river study in cooperation with the State of Washington.

Last year at this Conference my company presented a progress report on the study program and outlined several major leads that were ready for pilot investigation. In the intervening year we have carried out these investigations and have reached some definite conclusions. As a result, the research group has made recommendations for a program that they believe will control slime growth in the river below the Camas mill. The program has been discussed with the Director and staff of the Washington Pollution Control Commission and agreement has been reached. Engineering work is presently going forward and details concerning construction, time schedules for completion, and cost estimates will be filed within the next 60 days with the Washington Pollution Control Commission. According to our best estimates this program to control slime growth will be completed and in operation by August, 1960.

Because of the extent of slime growth in the lower Columbia, it was recommended last year that the Washougal to Vancouver survey be extended downriver to Cathlamet. Through the cooperative effort of the Washington Pollution Control Commission and Oregon and Washington pulp mills along the lower Columbia, with assistance from the Oregon Sanitary Authority, this lower river monitoring program is now under way. Crown Zellerbach is pleased to be a participant in this study because we believe it can do much to further define the slime problem and to determine the degree of improvement when abatement measures are taken.

And that is the conclusion of my statement.

CHAIRMAN STEIN: Thank you, Mr. Butler. Any questions or comments?

Thank you. Mr. Garton.

MR. GARTON: Thank you, Mr. Butler. The next gentleman I would like to call on would be Mr. Wollenberg of Longview Fibre Company.

MR. WOLLENBERG: Mr. Stein, gentlemen: My name is R. P. Wollenberg. I am Vice President of Operations for Longview Fibre Company at Longview, Washington.

First I would like to report that we, along with other pulp and paper mills along the Columbia, have entered into a cooperative water quality monitoring program in conjunction with the authorities of both states. We feel sure that the factual data developed by this program will contribute to more precise evaluation of whatever pollution problems may exist.

Second, I would like to comment on the "Action Program to Control Pollution." This report fails to recognize waste disposal and dispersion as a legitimate water use which is of concern in developing the Action Program, as indicated by the record of the first conference. The finding mentioned ignores a great deal of testimony given at the first conference as well as ignoring the provisions of the applicable state and federal laws. Further, the action program would require quarterly reports from our company of our progress in action to reduce pollution. The report alleges

that we discharge nutrients causing deleterious sphaerotilus growths with the qualification with respect to our Kraft mill, and I quote: "Significance of Kraft mill effluent not definitely defined." Inasmuch as we are unaware of any significant quantity of sphaerotilus nutrients in our effluent and have not been given any standards, we find the requirement to report progress to be meaningless, and we are of the opinion it fails as a legal requirement for want of definiteness. We also contend that the fact that we have complied with the requirements of the State of Washington and have been issued a permanent permit after careful investigation by the Pollution Control Commission is evidence that further corrective action on our part is not presently indicated. We should not be asked to report progress on action which is not necessary or required.

CHAIRMAN STEIN: Thank you, Mr. Wollenberg. Are there any questions or comments? Mr. Garton?

MR. GARTON: No questions.

CHAIRMAN STEIN: Thank you.

MR. GARTON: The next gentleman I would like to call on would be Mr. Judy of the Washington State Association of Industries.

MR. JUDY: Mr. Chairman, conferees: I am John Judy, chairman of the subcommittee of water resources for the Association of Washington Industries.

While the Association of Washington Industries haven't taken any official action on your action program, I would like to make a few comments, many along the lines of those that have already been presented by industry. Our committee feels that one of our main responsibilities is to preserve the water quality of our great natural resource here in the Northwest, of our water, and our basic policy is multiple use of these waters. And I would also like to point out at this time that I am sure that all industry feels that some program of water quality control is very necessary toward the preservation of our water resources. At the same time we feel that this program definitely has to be well thought out and very properly controlled and given economic consideration.

Then the point that I did want to bring out, which

has been brought out previously, and that is that in the Action Program you list just three legitimate uses, and we very definitely feel that waste disposal must be included as a legitimate use, and when properly controlled and properly regulated by the state agencies, it is a legitimate use.

The Association of Washington Industries will present in the near future, I am sure, a formal statement on our program.

CHAIRMAN STEIN: Thank you, sir. You have any questions or comments?

MR. GARTON: I have some questions, but I will take them up in executive session.

Thank you, Mr. Judy. The next representative I would like to call on would be from Commercial Fisheries, Mr. Ted Farnsworth.

MR. FARNSWORTH: Mr. Chairman, ladies and gentlemen: I am Ted Farnsworth, the Columbia River Fishermen's representative to the Washington-Oregon Interlocking Committee on Pollution.

I'd like to speak as a commercial fisherman. The commercial industry of Washington and Oregon located on the Columbia River represents the entire population of the United States who depend on fish to supplement their diet. This industry harvests fish which are spawned in the Columbia River system and are pastured in the Pacific Ocean. The Pacific Ocean is half of the world. The denuding of the Columbia River, and consequently the Pacific Ocean by careless industries and municipalities is one of the greatest disgraces of our generation. The occurrence of coliform bacteria endangers the health and welfare of the general public and the commercial fisherman, especially on the Columbia River. The slime growths which occur at various times cannot be adequately described by words, except to refer to the net which was displayed here at the first meeting of this Conference.

I'd like to refer to different times when this sphaerotilus growth has occurred on the Columbia River, as recorded by the Columbia River Protective Fishermen's Union -- Mr. Westerholm. Last year our September season opened on approximately the 15th of September. The first three days of

our season was very satisfactory. At that time we had a four-day closure, and on the second opening the boats at Vancouver had to quit fishing after one drift because of so much pollution in their nets that they would not fish. I had 283 pounds of fish in one drift and could hardly get the net out of the boat for the second drift.

The occurrence that we have recorded during the winter, I will read this record from our office at Astoria.

From the first week in January to February, the smelt fishermen encountered very severe pollution in the Astoria area, also in the Clatskanie area. The pollution was thick dead slime.

The gillnet season opened February 15th, and regular salmon fishermen encountered some pollution. On February 23rd, pollution showed heavily in different areas. In Astoria very severe pollution prompted some of the fishermen to rack their nets in disgust. At this time pollution also showed up at St. Helens. Kalama showed newand old slime growths. The fishing season closed March 1st, therefore no reports.

In April the fishermen, while clearing their drifts of snags, encountered heavy pollution in their special snag nets.

May 1st, the river began to rise and pollution was extensive in some areas. From May 18th to 20th, the river raised to the 14-foot stage, and pollution showed severely in the lower river below Longview. The raise of the river is a yearly occurrence due to the melting of the snow in the mountains. The fishing season closed May 27th and opened June 18th. No survey was made.

From June 18th through July 15th, no pollution was encountered. July 29th to August 25th, no pollution was encountered, only a small amount in nets racked at the end of the season, which means that there was a small amount of growth starting at that time of year.

Our gillnet seasons have been reduced from 241 days in 1941, to only 98 days in 1959, and we feel that this pollution as it occurs has a very serious effect on the welfare of our fishery and the shortening of our seasons.

Thank you, gentlemen.

CHAIRMAN STEIN: Thank you, sir. Do you have any questions or comments?

MR. GARTON: I have one question I would like to ask you. The major portion of your report was pertaining to sphaerotilus growth and shortening of your season as a factor in the sphaerotilus growth. Do you think the standards drawn by this Action Program are adequate for the protection of fisheries, other than sphaerotilus growth?

MR. FARNSWORTH: Yes, I do. I think that the standards should not be determined just for the bathing areas and for recreational areas, but should be the entire length of the Columbia River. The tugboat men, gillnet fishermen, who encounter spray in their face and are encountering the use of water on their hands and so forth, should be protected just as much as the people out here swimming on the beach or water skiing.

MR. GARTON: In other words, the objection to this Action Report would protect fisheries, by the objectives of the report?

MR. FARNSWORTH: Yes.

CHAIRMAN STEIN: Thank you. Mr. Garton.

MR. GARTON: The next statement I would like to have would be a statement from Mr. Nelson of Interstate Pollution Abatement Committee.

Mr. Nelson.

MR. NELSON: Mr. Stein, conferees, gentlemen: My name is Howard Nelson. I am co-chairman of the Interstate Pollution Abatement Committee.

The whole matter of pollution abatement actions agreed upon at this meeting of your three agencies will determine the future industrial and recreational expansion of this great area of the Columbia River. You will set the stage here and now for a great and healthy development of this area by making a large water supply useable by all present and future users, or you can take action which will

forever preclude the realization of maximum benefits that the Columbia River could produce. The responsibility for the future is yours.

If presently established industries located along the Columbia River and on tributaries are required to clean up their pollution, and municipalities are required to clean up theirs, many new industries will be attracted to the area because of an abundant useable water supply. We are living in a great water-use recreational area. This type of recreation has increased beyond belief in the last few years and the population blow-up will bring even greater use in the future. There is no denying that this type of use has a great impact on the economy of the area. Commercial fishing is very important to this area of the Columbia and the United States.

We can have a good water supply, industry and recreation in the future if adequate and proper steps are taken here today to insure that future. Again, gentlemen, the future rests with you.

It is encouraging to see a proposed Action Program to control pollution on the Lower Columbia River between the Bonneville Dam and Cathlamet, Washington. At long last it appears that cooperative corrective action can be taken. We hope that it will be carried through and accomplished. There are three points, though, that should be raised or clarified. In the last major paragraph of the report is outlined the course of action to be taken by an industrial establishment if additional information is needed. This appears to be the weak point in the report in that it could be used as a means to prolonged research and evasive action. Too many years could lapse before final action would be taken.

I would like to point out that in 1943, there was published a "Report on Investigation of Pollution in the Lower Columbia River" by Mr. John H. Lincoln, Chief Chemist, and Richard F. Foster, Biologist, for the Washington State Pollution Commission and the Oregon State Sanitary Authority. The report was published sixteen years ago and since that time it is reported that extensive research has been carried on. We do not want another sixteen years to slide by and the Columbia to get just a little thicker. Gentlemen, I feel that there has been enough time allowed for study of the problem -- it is now time for action.

The second point on the report that should be raised is on page three, which pertains to maximum limits of slimes, solid materials and toxic, colored or other deleterious substances. It would appear that the standards would be more to the point if they were specifically spelled out. This portion of the report does not appear to be so strong as it should be for such an important part.

The third question that should be raised pertains to the recommended maximum bacterial count as stated on page two of the action program. Does the recommendation pertain to each outfall or source of contamination, or does it pertain to the entire river? This point should also be specifically stated in the program.

The members of the Interstate Pollution Abatement Committee strongly urge you gentlemen to finalize a pollution abatement program that will actually restore and maintain a high quality water supply in the Lower Columbia River. It can be done if the problem is strongly and cooperatively attacked. The future industrial and recreational expansion of the great Columbia River rests in your hands.

Thank you.

I would like, Mr. Chairman, to read a very short statement from Mr. Stewart of the Vancouver Wildlife League, if I may.

CHAIRMAN STEIN: Without objection, you may.

MR. NELSON: "Reference the published Action Program to Control Pollution on the Lower Columbia River between Bonneville Dam and Cathlamet, Washington.

"In most respects the report appears to be quite good. It does have a few weak points but no doubt they will be eliminated in the final Action Program. At least, after so many years of a relatively indifferent pollution abatement program on the Columbia, a joint Action Program is finally drawn up.

"If it is diligently carried forward, the Columbia can be restored to a good quality and will be attractive to new industries and will open up other potential uses.

"The U. S. Public Health Service is urged to carry out the program to the fullest extent of Public Law 660. Ray Stewart, President, Vancouver Chapter, Washington Wildlife League."

CHAIRMAN STEIN: Mr. Garton.

MR. GARTON: Mr. Wendler, of the State Department of Fisheries.

MR. WENDLER: Mr. Chairman, conferees, gentlemen: I do not know the status of a formal report that the Department of Fisheries may issue to this Conference. However, I might give my view on this particular program.

The Washington Department of Fisheries is in agreement with the objectives of the program. I wish to concur with the Fish Commission statement that was given earlier, which in part stated a greater emphasis should have been placed on legitimate water uses for fish and aquatic life. The Action Program as developed by the states and the federal government is based upon legitimate water uses and quality of water needed for those uses. Conservative agencies, such as the one I represent, have expended vast sums of money to rehabilitate areas formerly lost to fish production because of hydroelectric developments.

In many cases preliminary observations have indicated that these efforts are worthwhile and successful. However, for adult fish to reach these rehabilitated areas from the sea and for the young to migrate from these areas to the sea, they must first pass through pollutants whose effect on fish and aquatic life are not wholly known. And for this reason we highly recommend the Action Program as stated.

Thank you.

CHAIRMAN STEIN: Thank you. Are there any questions or comments?

MR. GARTON: Thank you, Mr. Wendler. Unless there happens to be people who came in late or people I haven't been informed of, our last speaker today would be Mr. Larson of the State Department of Game. So if there are other people that wish to speak, let me know immediately.

MR. LARSON: Mr. Chairman, conferees and gentlemen: My name is Ralph Larson. I am a fisheries management coordinator with the Washington State Department of Game.

The Washington State Department of Game feels that the objective of the Action Program as developed for the Lower Columbia River is a valuable step toward protecting the fisheries resources of the Columbia River. We feel that the program is a good one and should be carried out to its conclusion. Sport fishing for anadromous species of fish is becoming more intense each year in the Lower Columbia River area. Therefore, the elimination of factors that would tend to produce pollution becomes more important each year if we are to maintain these runs.

Therefore, we feel if the objectives of this Action Program are brought to a successful conclusion, it can lead to the enhancement of the sports fishery of the Lower Columbia River.

CHAIRMAN STEIN: Thank you. Are there any questions or comments?

MR. GARTON: Thank you, Mr. Larson.

Mr. Chairman, I think that concludes our report.

CHAIRMAN STEIN: Thank you, Mr. Garton. I will now call on Mr. Poston for federal representatives.

Mr. Poston.

MR. POSTON: Mr. Chairman, I would like at this time to call on Mr. L. Edward Perry, Director, Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service.

MR. PERRY: My name is L. Edward Perry of the Bureau of Commercial Fisheries here in Portland.

The Bureau of Commercial Fisheries has continual interest in maintaining high water quality in the Columbia River system. We appreciate the opportunity to present a brief statement at this second conference on the water pollution control problems of the Columbia River.

The maintenance and utilization of one of our

valuable resources, namely the production of fish, principally salmon, plays a vital role in the development of the Columbia Basin. Because of this influence and the pressure to build dams, great effort is being placed on the study of all factors, natural or man-made, that affect the production of salmon. Pollution is one of these.

Through the Columbia River Fishery Development Program, the Federal Government has endeavored to give direct aid to the conservation of the salmon and steelhead resource. Twenty hatcheries have been constructed, some 1,200 miles of stream have been cleared, and many fishways built for fish utilization, and over 400 screens have been constructed in irrigation diversions and support has been given for extensive research projects.

We have long advocated the solution of the pollution problems in the lower Columbia Basin, and we are pleased that the state pollution control agencies and the Public Health Service are putting intensive effort into the solution of this problem. We feel that this is one of the vital points in maintaining the salmon industry.

Sphaerotilus continues to be a serious nuisance and hindrance to fishing in the Columbia River. We encourage continued effort to eradicate it.

We recommend adoption of the Action Program that has been prepared by the conferees, or a similar one that may be resolved by the pollution control agencies. This program should be given whole-hearted support.

Thank you.

CHAIRMAN STEIN: Thank you, sir. Are there any questions of Mr. Perry?

Mr. Poston.

MR. POSTON: Are there any other federal agencies represented here today who might wish to make a statement on this Action Program?

If not, Mr. Chairman, I believe this concludes the presentation by the Federal Government.

CHAIRMAN STEIN: Before we recess for lunch, I think I ought to outline the tentative schedule for the rest of the day. We will reconvene at one o'clock. As I understand it, Mr. Everts has pointed out that there will be one more statement from people in Oregon. I hope we can get that before we break up again. At that time we will have a brief discussion of the conferees discussing the Action Program and the recommendations here.

Now, if time permits, and I think the schedule is running rather well, if anyone in the audience has any thoughts after hearing these statements and wants to make another brief statement and add something here, we will be happy to receive that when we reconvene. After we have had a brief discussion, the conferees will have a short executive session to consider the comments, and then we will have another discussion of the conclusions of the conferees -- give the people here an opportunity to comment on those again if they wish -- and we will summarize the Conference.

With that, we stand recessed until one o'clock.

...Whereupon at eleven-thirty o'clock a.m., a recess was taken until one o'clock p.m. of the same day...

AFTERNOON SESSION

...Whereupon, the Conference was resumed, pursuant to the taking of the recess, at one o'clock p.m....

CHAIRMAN STEIN: The Conference is called to order.

There may be one or two more statements, and we will call on Mr. Poston. Do you have any other federal representatives, Mr. Poston?

MR. POSTON: Mr. Chairman, Mr. J. T. Barnaby, Chief of the Division of Sport Fisheries, U. S. Bureau of Sport Fisheries and Wildlife, is now in the audience and has a statement he would like to present at this time.

MR. BARNABY: Mr. Chairman, official conferees, ladies and gentlemen:

My name is J. T. Barnaby, Chief of the Division of Sport Fisheries, United States Bureau of Sport Fisheries and Wildlife.

The Bureau of Sport Fisheries and Wildlife endorses the objective of the Action Program and desires to emphasize the need for pollution control in the Columbia River to protect the valuable fish and wildlife resources of the area.

Pollution of the waters of the Lower Columbia River and its tributaries between Bonneville Dam and Cathlamet, Washington, is detrimental to the maintenance of the fish and wildlife resources of the area.

Thank you.

CHAIRMAN STEIN: Are there any questions?

MR. POSTON: Are there any other federal representatives that have come in that would like to be heard at this time?

I believe not, Mr. Chairman.

CHAIRMAN STEIN: I understand there may be one other statement by someone from Oregon; that he is not here yet. And if he comes in we will try to find a convenient spot in the program so he may be able to speak.

Now, the next point is a preliminary discussion before we have an executive session on the Action Program, and first we would like to hear from the conferees and hear if they want to say anything now for the record.

Do you have anything, Mr. Poston, on the Action Program?

MR. POSTON: I believe not at this moment.

CHAIRMAN STEIN: Mr. Everts?

MR. EVERTS: Mr. Chairman, there has been three suggestions, as far as the Action Program is concerned, that were made this morning. People representing the commercial fisheries' interest have suggested that the bacterial damage limit applicable to boating be the same as that provided for bathing. They have also suggested that the beneficial uses outlined in the Action Program be extended to include fish and aquatic life; and the people from industry have suggested that the beneficial uses of these waters should include dispersion of effluents. I think those are matters that the conferees are probably going to consider in their deliberations later.

CHAIRMAN STEIN: That is correct. Now, does anyone want to talk about that now, or any other problem that we may have? Do you have anything you want to say now, Mr. Garton?

MR. GARTON: Only that the wording on page 2, "Solid materials discharged by municipalities and industries," we are going to change the language. That will be taken up in executive session, Mr. Chairman.

CHAIRMAN STEIN: We will be glad to consider that.

MR. GARTON: We will take it up then. The only other thing is, I would like to thank everyone who presented statements here today for their forthright position. Their short statements, concise and tothe point, have been of assistance to the Conference; and I assure you that the

problem, as I see it, will be how it's carried out.

CHAIRMAN STEIN: Well, I have a couple of suggestions and possible statements to make here. One, I think the area of agreement among the conferees and among the people who made statements here is considerable. Certainly, a lot of work has taken place since the last Conference, and I think we are moving along toward an understanding and a program for solution. And looking at this Action Program, I think, as many of you have recognized, the Action Program sort of paints with a relatively broad brush and is pretty definitely a broad guidance.

Now, there is no doubt that a continuing follow through and a dealing with problems on a case by case basis will have to result, in line with provisions of the Federal Act, and I know the feelings of the states and certainly the Public Health Service.

I think we all recognize that any decision in carrying out this action program, the initial decision concerning a municipality or an industry or any other source of pollution within the state, rests with that official state agency. However, I think in arriving at determinations the official agencies might wish to consider having a continuing technical committee to handle these and other problems as they come up, because I have never seen one of these programs yet where we anticipated all the problems. In fact, as soon as you get through with this, there is always a problem you didn't think of. And I would suggest that the official agencies appoint members to this committee to serve as technical advisers to official agencies -- (1) in arriving at problems and identifying areas that have to be looked into; and (2) to consider the technical aspects of the proposals which might be made to meet this Action Program and which are not specifically covered in the program. In addition to that, I think, if we are going to consider the time schedule, and in particular to the municipalities, we probably should have a spelling out for the information of the municipalities as to which category they fall into for remedial action. As you will recall, the Action Program proposes that projects involving the institution of effective disinfection or minor plant and operation improvements are to be faced with one time schedule, and projects involving basic construction, they have a little different time schedule.

Now, I think we should try as soon as we can to get a list of those communities out. Hopefully, we may be able to include that in the summary. I think it's just a question of evaluating the information put in the record and getting that information out.

Now, I would also like to say that this Action Program at the present time is a proposed Action Program, and the conferees will consider that very shortly in executive se sion. I am sure all the points brought up here will receive careful consideration.

Now, if there are any other statements or any additional ideas or information you think the conferees should have before we recess for an executive session, I think we will entertain those now. Does anyone here wish to make such a statement or a suggestion in addition to those which have already been made?

If not, we will ask the board of the conferees if they would have anything to say at this time before we have an executive session.

MR. GARTON: I assume it goes without saying that technical committee will be established and that we will continue to gather basic data necessary for evaluation so that the committee's activities can be -- problems can be defined through logical reasoning to the point that we get compliance by industry and the states.

MR. EVERTS: I have no objection to that as long as it's within the province of this Conference to provide such a committee.

CHAIRMAN STEIN: With that, I think the conferees will adjourn for executive session. Now, it's very, very difficult to say right now how long we are going to take. Anticipating the problems we are faced with, I don't think it's going to be very long. It is quarter after one now. I wonder if we would like to set a definite time to come back. Do you people think we can reconvene at two o'clock or would that be too soon?

MR. GARTON: We can try it.

CHAIRMAN STEIN: In other words, we will stand

recessed until two o'clock, and at that point we will have a report from the conferees as to an Action Program and then we will ask for comments at that time from the floor, because even then it will not necessarily be definitive, and then we will summarize and conclude the Conference. With that, we stand adjourned until two o'clock.

...Whereupon the conferees withdrew to executive session, after which, at two ten o'clock p.m., the same day, the Conference was reconvened...

CHAIRMAN STEIN: The Conference is in session. Before we come to the deliberations of the executive session, we will call on Mr. Everts, who has one more invitee and participant.

I would like to ask all participants and the members of the Conference panel to speak up, because since the microphones have gone dead, the reporter is having a little difficulty in hearing what we all say.

Mr. Everts.

MR. EVERTS: Thank you, Mr. Chairman.

It is my privilige, Mr. Chairman, to present Mr. J. T. Marr, who is the Executive Secretary of the A. F. L. - C. I. O. Council, who will present a statement on behalf of his organization.

Mr. Marr, would you like to come over to the microphone here?

MR. MARR: Mr. Chairman and other members; As stated by your Chairman, my name is J. T. Marr. I am the Executive Secretary of the A. F. L. - C. I. O. and president of Hells Canyon Association, formerly; now River Resource Association of the Pacific Northwest. It's just a technical thing. We haven't got our articles of incorporation amended as yet. That's why I am giving both names.

The National Hells Canyon Association is a non-profit cooperative association composed of the major farm and labor organizations in the Pacific Northwest, and public utility districts and electric cooperatives in the states of

Oregon, Washington, Idaho and Montana. Our organization is dedicated to the principle that the water resources of the Columbia River should be developed fully, on a comprehensive, multiple-purpose and regional basis, and that they should be utilized in the best public interest.

We are pleased to give our support to the joint pollution control Action Program that has been worked out by the Oregon Sanitary Authority, the Washington Pollution Control Commission, and the United States Public Health Service. The problem of pollution of the Columbia River is regional; it is not one that can be solved by any state or agency working alone. We are glad to see this start toward a joint Action Program, and hope that the agencies involved will continue to work in the same direction, toward further and more effective cooperation.

We would like to suggest at this time that the continuation of public conferences on this subject might prove to be helpful. We have accomplished a great deal in the past year on the basis of the first conference. However, much work remains to be done in order to reach a better understanding of the problem of Columbia River pollution and in order to find meaningful solutions to that problem. We hope you will decide at this conference that later public meetings are needed.

We would also like to suggest that you give some consideration to the possibility of preparing a more comprehensive report on Columbia River pollution control, outlining, perhaps, the problems as they exist at present, suggested remedies and, most important, the problems anticipated for future years. We feel that the preparation of such a report would help to put water pollution control in a more meaningful context of overall river development programs, and that it would provide valuable direction for further work in the field. We have in mind a report comparable to that prepared by the Fisheries Subcommittee of the Columbia Basin Inter-Agency Committee in 1957, under the leadership of Herbert Lundy. It is even possible that the CBIAC, which includes representatives of all the Columbia Basin states and the Federal Government, might be a good agency to handle its preparation.

In any event, it is not enough to solve the problems that immediately face us. We know already that the

problems that are to come will be far greater and more difficult to solve.

Right now, for example, pollution caused by municipal and industrial waste disposal interferes mainly with recreational and commercial, especially commercial fisheries, uses of the Columbia and its main tributaries. It is not hard to see, however, that in a relatively short period of time pollution is going to be a critical problem for the health and growth of the very cities that now contribute to it; and further, that pollution can and may inhibit the full industrial development of the Northwest, as well as the expansion of industries here at the present time.

The conflict that is emphasized in the current Action Program is, therefore, only a small indication of the conflicts that lie ahead of us.

It would be a mistake, we believe, for anyone to come to the conclusion that pollution has its proponents as well as its opponents -- that there is any question here of cities and industries vs. sports and commercial fishermen, swimmers, water-skiers, and boaters. On the contrary, it is as much to the interest of the cites and industries that they solve their present waste disposal problems now, on the basis of present knowledge.

For this reason, we believe that the enforcement requirements of the Pollution Action Program are entirely reasonable, fair, and in the public interest.

We will appreciate being informed of your further progress in this important undertaking.

Thank you very much, Mr. Chairman, for the opportunity of making this appearance.

CHAIRMAN STEIN: Thank you.

MR. EVERTS: Thank you, Mr. Marr.

CHAIRMAN STEIN: Are there any comments or questions?

Now we will report on the deliberations of the conferees at the executive session. All the points raised by

the various participants at the Conference were given careful consideration. I would like to briefly talk about some modifications which have been made in the Action Program, then read the Action Program as it is amended, and we will at that time entertain comments or questions from participants and the conferees, if there should be any.

One, the Action Program was modified to just deal with water uses of the Lower Columbia River endangered by pollution. It is also believed that the maintenance of conditions to support fish and aquatic life are inherent in the commercial uses, including commercial fishing, and recreational uses, including sports fishing. Due consideration was given to the statements by the commercial fishermen asking for a uniform quality requirements in terms of coliforms, and that was done. This is particularly appropriate in view of the fact that most of the Lower Columbia River is a water skiing area, at any rate, and some of the other material relating to public water supply and other recreational uses was eliminated.

There was no change in the material dealing with solid materials and primary treatment or its equivalent, the thought being that primary treatment is in turn particularly applicable to municipal waste, and the equivalent would have to be determined on a case by case basis by the state agency concerned.

The rest of this program remains about the same. At the completion of it we will have the states give a list of their projects, and this involves municipalities, breaking them down into those projects involving major construction and those projects involving the institution of effective disinfection and minor plant and operation improvements. You will recall that there was a slightly different time schedule for these. Otherwise, the action program remains the same.

I will read the Action Program with the changes and try to imply inflection of voice to indicate the changes. All the changes are within the first few sentences, by the way, although some material is omitted, and I may break in and indicate where we are omitting.

ACTION PROGRAM

The Action Program is based upon (1) the legitimate water uses endangered by pollution in the lower Columbia River, and (2) the quality of water needed for those uses. These are discussed in the following two subsections. Specific action in terms of municipal and industrial pollution control and the timing of such action is discussed in the third subsection.

Legitimate Water Uses Endangered by Pollution - Lower Columbia River.

The legitimate water uses of concern in developing the Action Program are those interfered with or endangered by pollutants originating through municipal and industrial activity. The record of the first Conference indicates that these uses are:

(1) Public water supply.
(2) Commercial uses including commercial fishing.
(3) Recreational uses including sport fishing.

Water Quality Needed to Serve these Legitimate Water Uses.

In order to conserve the waters of the Lower Columbia River for the specified legitimate water uses, limits must be established for the following:

(1) Bacteria (Coliform).
(2) Solid materials discharged by municipal or industrial operation.
(3) Sphaerotilus.
(4) Toxic, colored, or other deleterious substances.

Bacteria (Coliform) -- and in this section there will be a considerable amount of deletion.

Bacteria (Coliform): The limit of Coliform bacteria is as follows:

> A representative number of samples should average less than 240 per 100 milliliters and should not exceed this number in more than 20 per cent of samples examined, when associated with domestic sewage.

Solid materials discharged by municipal or industrial operations: The limit of such material is as follows:

Floating, suspended and settleable solids attributable to sewage and industrial waste are limited to that remaining after primary treatment or its equivalent; and which after reasonable dilution and mixture with receiving waters does not cause the formation of sludge beds and does not interfere with the specified legitimate uses.

Slimes: The limit of such material is as follows:

The presence of sphaerotilus in such amounts that will interfere with specified legitimate uses.

Toxic, colored, or other deleterious substances: The limit of such material is as follows:

Substances alone or in combination with other substances or wastes, in sufficient amounts or of such nature as to make receiving waters unsafe or unsuitable for specified legitimate uses.

(At this point Mr. Dworsky continued the reading of the amended Action Program.)

The above specified water quality limits are aimed at the particular problems outlined at the first session of the Conference, September, 1958. It is expected that any new problems arising in the future will be effectively controlled by the water pollution control agencies of the States, including the establishment of additional water quality limits. The Federal Government will provide support to aid in solving future problems if necessary.

Municipal and Industrial Pollution Control Requirements

The following Action Programs, including specifications of time, are established for muncipalities and industries:

Municipal: All municipalities in Oregon and Washington situated on the Lower Columbia River from Bonneville

Dam to Cathlamet, Washington, or situated immediately adjacent thereto so as to produce an effect not consistent with the water quality requirements specified herein, shall take effective action to construct sewage treatment works comprising not less than primary treatment and effective disinfection as follows:

A. Projects involving the institution of effective disinfection or minor plant and operation improvements.

(1) Work to be completed and in operation by July 1 1960.

B. Projects involving major construction.

(1) Financing arranged not later than June 1, 1960.

(2) Final plans and specifications prepared not later than June 1, 1960.

(3) Contracts awarded not later than August 1, 1960.

(4) Projects in operation not later than July 1, 1961.

Industrial: All industries in Oregon and Washington situated on the Lower Columbia River from Bonneville Dam to Cathlamet, Washington, situated immediately adjacent thereto, or involved in operations so as to produce an effect not consistent with the water quality requirements specified herein, shall take effective action to reduce pollution produced by them in order to achieve the water quality specified.

Each State will assess the status of each industrial establishment with respect to its pollution problem. In doing this, each State will require each industrial establishment to submit a report in triplicate within 60 days after the date of the second session of the Conference indicating how the establishment proposes to:

(1) Control pollution through inplant or process changes, by-products recovery, or other equivalent methods.

(2) Control pollution through the construction

of treatment processes, and disposal methods, or other equivalent methods.

Action to reduce pollution through inplant or process changes, by-products recovery or other equivalent methods will be instituted immediately upon submission of the report. Dates of completion of such activities will be specified in the report, including information on the dates of completion of all specific statements of all such activity.

Action to control pollution through treatment processes, disposal methods, or other equivalent methods, will be completed and placed in operation not later than March 1, 1961. Dates of completion of such activities will be specified in the report, including information on the dates of completion of all specific segments of such activity.

If, in the light of the above program, any additional knowledge is needed on the part of an individual industrial establishment, a supplementary report and a request for a time extension will be submitted within 60 days of the second session of the Conference. This report will outline the nature of the problem, specify in detail the character and aims of studies and investigations under way or to be undertaken, list the resources to be applied to such studies and investigations, and indicate the progress, if any, made to date. If such request is granted, the studies and investigations will be undertaken at a level sufficiently high to anticipate a reasonable solution in not more than one calendar year from the date of submission of the supplementary report. The supplementary report will specify the date of completion of such studies and investigations. Upon completion of these studies and investigations, a time schedule will be established for the institution of pollution control methods or facilities.

Each municipality and industrial establishment will provide a report in triplicate to its State Water Pollution Control Agency at not less than three-month intervals of progress made in carrying out this Action Program. Each State will provide to the conferees a quarterly report of progress with respect to its municipalities and industrial establishments.

CHAIRMAN STEIN: Thank you, Mr. Dworsky.

Now, in order to complete this before we get comments, I would like to call on Oregon and Washington to put in the record the list of projects, municipal projects involving the institution of effective disinfection or minor plant and operation improvements, and those municipal projects involving major construction.

I will call on Mr. Everts.

MR. EVERTS: Mr. Chairman, under "A" -- projects involving the institution of effective disinfection or minor plant and operation improvements -- there should be placed there for the state of Oregon the name of the city of Portland requiring effective disinfection of the plant effluent prior to its discharge to the Columbia River.

Under item "B", the name of the city of Portland should be placed for projects involving major construction relating to abatement of pollution in the Willamette River, a tributary of the Columbia.

CHAIRMAN STEIN: Thank you. Mr. Garton, would you give us the same information, similar information, for the state of Washington?

MR. GARTON: Under "A" completed by July 1, 1960; Camas, Washington; Vancouver, Washington; Kalama, Kelso and Longview.

In the category of projects -- "B" -- to be finished by July 1, 1961: Vancouver, Cathlamet and Camas.

I would also like to have recorded in the proceedings, Mr. Chairman, the statement that was requested in executive session pertaining to the subject matter on page 2 clarifying the language of that paragraph. Somewhere in the proceedings is the statement as follows: "The State agency will have the prerogative of determining what industrial waste disposal practices are equivalent to primary treatment."

CHAIRMAN STEIN: Yes, that will be done. Now may I ask you a question, Mr. Garton? Camas was listed under "A" and "B". Is there any way of differentiating between those projects in the descriptive terms?

MR. GARTON: Industrial and municipal.

CHAIRMAN STEIN: Which is "A", municipal?

MR. GARTON: Yes.

CHAIRMAN STEIN: Is there any other comment or question from the conferees?

If none, we will ask if anyone in the audience wishes to say anything related to the Action Program or these deliberations.

If there are no such comments, we will briefly summarize, although the summary is contained rather fully in the Action Program.

A. Specifically to go down the points of the statute, the occurrence of pollution of interstate waters subject to abatement under this Act:

The conferees have concluded that the legitimate water uses endangered by pollution in the lower Columbia River are public water supplies, commercial uses including commercial fishing, and recreational uses, including sport fishing, and that these uses are endangered by pollution originating through municipal and industrial activity.

B. The adequacy of measures taken toward abatement of pollution;

The conferees agree that the Action Program speaks for itself; that measures adequate to abate this pollution have not yet been taken, and this is because the municipalities and industries have not taken the action called for in the Action Program, and, presumably, if they will, this pollution will be abated. That also covers the nature of the delays. The nature of the delays is because of the lack of remedial action taken, possibly because of the lack of development of an Action Program before this time. As far as the time schedule, I think the time schedule is appropriately outlined in the Action Program, which has been repeated twice now and certainly speaks for itself.

Now we are drawing to the close, and at the present time we would entertain any statement on any matter pertaining to this Conference or the work before the conferees. Is

there any such statement? Do the conferees wish to make any statement at this time?

MR. EVERTS: Mr. Chairman, I would like to thank the people from Oregon who have taken time to come to this Conference and make statements on behalf of their organizations and their particular interests.

CHAIRMAN STEIN: We will have a continuing program, with the technical committee following through on this Action Program and assisting in helping these state agencies. Copies of the summary of the Conference will be available within the next few weeks and will be made available to you through your state agencies. Transcripts will come forth somewhat later and will be available through the same source.

And we would like to emphasize again that our role here is to encourage state action. The states have primary responsibility for carrying forward this program and dealing with pollution -- in other words, intra or interstate -- and your initial contact in any action relating to this Action Program should be with your appropriate state agencies.

With that, we will declare the Conference adjourned. Thank you all for coming and participating.

...Whereupon, the second session of the Conference was recessed at two-thirty o'clock p.m., Thursday, September 3, 1959, sine die...

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...At the request of the Oregon State Game Commission, there is quoted below a letter received by the Oregon State Sanitary Authority, dated September 28, 1959, from P. W. Schneider, Director, Oregon State Game Commission, Portland, Oregon...

"The Oregon Game Commission offers its wholehearted support in the Action Program being undertaken by the states of Oregon and Washington and the U. S. Public Health Service to control pollution in the lower Columbia River between Bonneville Dam and Cathlamet, Washington.

"The Game Commission has been and is actively

engaged in management of anadromous runs of fishes in the Columbia River and its tributaries. Restrictive angling regulations have been adopted in order to protect both downstream and upstream migrant trout and salmon.

"Research programs have been designed to produce maximum returns from hatchery releases and enhance natural reproduction. Stream improvement in the form of diversion screens and the removal of natural barriers have been conducted on tributaries.

"Pollutants injurious to fish life in the lower Columbia may be detrimental to the upstream and downstream migrants, and reduce the effectiveness of management measures. In order to maintain this valuable anadromous fish resource a clean river is necessary.

"For these reasons we wish to emphasize our support of your Action Program and ask that this letter be included in the records of your meeting in evidence of that fact."

Appendix A

ATTENDANCE ROSTER

CONFERENCE ON INTERSTATE POLLUTION

Portland, Oregon
September 3, 1959

AMBERG, H. R.	Project Leader, Crown Zellerbach, Camash, Washington
ANGELO, Lewis	Engineer, City of Camas, Camas, Washington
BACON, Vinton W.	Executive Secretary, Northwest Pulp & Paper Association, Room 202, Tacoma Bldg., Tacoma, Washington
BAKER, Raymond	Manager of Manufacturing Pulp Division Weyerhaeuser Company, Tacoma, Wash.
BARNABY, J. T.	Chief, Division of Fisheries Bureau of Sport Fisheries & Wildlife PO Box 3737, Portland, Oregon
BARNES, Francis M.	Assistant Secretary, Crown Zellerbach Corp., San Francisco 19, California
BEHLKE, James P.	District Engineer, Washington Pollution Control Comm., Olympia, Washington
BENSON, Donald J.	Associate Sanitary Engineer, Oregon State Sanitary Authority, Portland, Oregon
BESSEY, Roy F.	Consultant, 606 S. W. Evans Street Portland 19, Oregon
BLEDESE, John P.	Lawyer, Publishers' Paper Co. Portland 4, Oregon
BOROVICKA, Robert L.	Coordinating Biologist, Oregon Game Comm., Portland, Oregon

BOTTCHER, Richard P.	Forester, U. S. Forest Service, 729 N. E. Oregon, Portland, Oregon
BOUGHNER, Richard C.	Sanitary Engineer, 13th Naval District DPWO, Bldg. 247 U. S. Naval Station
BRESEE, H. O.	Chairman, Water & Pollution Abatement Oregon Wildlife Federation Portland 13, Oregon
BRISBOW, R. G.	President, Columbia River Fishermens' Protective Union Box 154, Wauna, Oregon
BUTLER, R. A.	Resident Manager, Crown Zellerbach Corp., Camas, Washington
CARTER, Glen D.	Aquatic Biologist, Oregon State Sanitary Authority, Portland, Oregon
CHAMPAIGN, M.D., Donald A.	District Health Officer, Clark-Skamania Health District, Courthouse Vancouver, Washington
DECKER, Jack L.	Chief Chemist, Columbia River Paper Mills, Vancouver, Washington
DUNLAP, R. C.	Parks Planner, State Parks, Salem, Ore.
DWORSKY, L. B.	Officer in Charge, WS & WPC Program USPHS, Portland, Oregon
ELDRIDGE, Edward F.	PHS, Portland, Oregon Physical Science Administrator
ELLSWORTH, D. C.	Vice-President, Oregon Pulp & Paper Co. and Columbia River Paper Mills Portland, Oregon
EVERTS, Curtiss M.	Oregon State Sanitary Engineer (Secretary and Chief Engineer, Oregon State Sanitary Authority) Portland, Oregon

FARNSWORTH, Theodore M.	Chairman, Washington-Oregon Interlocking Sports and Commercial Fisheries Committee, 1614 Franklin Street, Vancouver, Washington
FISK, Garry L.	SA Sanitary Engineer, USPHS, Portland
GARTON, Art	Director, Washington Pollution Control Comm., Olympia, Washington
GELLMAN, Isaiah	Regional Engineer, National Council for Stream Improvement, Portland, Oregon
GERRARD, Oscar J.	St. Helens, Oregon
GREGG, Dr. Ralph	Director of Health, Cowlitz County Health Department, Kelso, Washington
HOLCOMB, Lewis	Special Service Officer, Washington Pollution Control Comm., Olympia, Wash.
HALL, H. C.	Assistant Resident Manager, Crown Zellerbach Corporation, St. Helens, Oregon
HAMMOND, William H.	Research Director, Association of Washington Industries, Olympia, Washington
HANSLER, Gerald M.	SA Sanitary Engineer, USPHS Washington, D. C.
HANSON, Walter O.	Forester, U. S. Forest Service, Portland, Oregon
HOWARD, Mark	Health Information Consultant Oregon State Board of Health Portland, Oregon
INGRAM, William M.	Public Health Service (Biologist) RA Taft Sanitary Engineering Center Cincinnati, Ohio

INMAN, L.	Manager, Water Department, City of Longview, Washington
JENSEN, Emil C.	Chief Sanitary Engineer, Washington State Department of Health, Seattle, Washington
JOHNSON, Bryan	District Engineer, Washington State Pollution Control Comm., Olympia, Washington.
JUDY, John	Technical Superintendent, Hooker Electro-Chemical Co., Association Washington Industries, Tacoma, Washington
KERANEN, Albert F.	Treasurer, C.R.F.P.U. Astoria, Oregon
KITTRELL, F. W.	Public Health Service (Engineer) Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio
KOPING, Roy W.	Fisherman, Commercial, C.R.P.U. Portland, Oregon
LARSON, Ralph W.	Fishery Management Coordinator, Washington Department of Game Olympia, Washington
LEAVER, Robert E.	Senior Public Health Engineer, Washington State Department of Health Seattle, Washington
LUITEN, Irvin H.	Public Affairs Manager, Oregon Weyerhaeuser Company, Portland, Oregon
MARR, J. T.	River Resource Association of the Pacific Northwest, and Executive Secretary of the Oregon AFL-CIO, Portland, Oregon
McBRIDE, Robert G.	Reporter (Working Press) Oregon Journal Portland, Oregon

McCALLUM, Gordon E.	Chief, Division of Water Supply & Pollution Control, PHS, Washington,D.C.
McIRVIN, D. W.	Superintendent, California Packing Vancouver, Washington
NEALE, Alfred G.	Washington Pollution Control Comm. Olympia, Washington
NELSON, Donald	Sanitarian, Clark-Skamania District Health Department, Vancouver, Wash.
NELSON, Howard E.	Co-chairman, Inter-State Pollution Abatement Comm., Vancouver, Wash.
NIEMEYER, Al	Commercial Fisherman, Vancouver, Wash.
ORDAL, Erling J.	Professor of Microbiology, University of Washington, Seattle 5, Wash.
OWENS, Eben L.	Development Engineer, National Council of Stream Improvement, Oregon State College, Corvallis, Oregon
PERRY, L. Edward	Program Director-Columbia River Fishery Program Office, Bureau of Commercial Fisheries, Box 4332 Portland 8, Oregon
PETERSON, Donald R.	Technical Coordinator, Washington Pollution Control Comm., Olympia, Washington
POOLE, B. A.	Indiana State Sanitary Engineer (Consultant USPHS) Indianapolis 20, Indiana
POSTON, R. F.	Regional Program Director, PHS, San Francisco, California
PENNY, H. L.	The Oregonian, Portland, Oregon
PUUSTINEN, W.	Chairman, Legislative and Conservation Committee, Columbia River Fishermen, Astoria, Oregon

QUINN, Joseph L., Jr.	Consultant, USPHS, Terre Haute, Indiana
RICHARDSON, W. R.	Manager Public Relations, Pacific Northwest, Crown Zellerbach Corp., Portland, Oregon
ROSSON, Roy	Sanitarian, Health Department, Kelso, Washington
RYSTROM, Ken	Reporter, Vancouver Columbian Vancouver, Washington
SANTOS, John F.	Chemist, U. S. Geological Survey Portland, Oregon
SCHENCK, C. C.	Secretary, Columbia River Sportsmen's Council, Portland, Oregon
SETON, Waldemar, III	Western Kraft Corporation, Albany, Oregon
SMITH, Daniel C.	Weyerhaeuser Company, Tacoma Bldg. Tacoma, Washington
SPIES, Kenneth H.	Deputy State Sanitary Engineer, Oregon State Sanitary Authority Portland, Oregon
STEIN, Murray	Chief, Interstate Enforcement, USPHS
STEWART, Roy	President, Washington Wildlife League Vancouver, Washington
TERRY, Allen G.	Asst. Chief Operation and Maintenance Branch of US Engineers, Pittock Block, Portland, Oregon
WENDLER, Henry O.	Fisheries Biologist, Washington Department of Fisheries Vancouver, Washington
WESTERHOLM, Wm.	Executive Secretary, Columbia River Fisherman's Protective Union

WILLIAMS, Robert M.	Technical Director, American Marietta 3400 - 13th Avenue, S.W., Seattle, Washington
WILSON, James G.	Vice President and Mill Manager Publishers Paper Company Oregon City, Oregon
WOLLENBERG, R. P.	Vice President - Operations Longview Fibre Co., Longview, Washington